CONTRACT

SPECIAL PROVISIONS

CSI-Inch/Pound

Project No:	HPP-3462(1)3	
Name:	NORTH OGDEN DIVIDE ROAD	
	SAFETY IMPROVEMENTS	
County:	WEBER	
Bid Opening:	July 22, 2003	

Date

Read carefully Section 00555M "Prosecution and Progress".



2002 - U.S. Standard Units (Inch-Pound Units) June 3, 2003

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I. 2002 Standard Specifications

The State of Utah Standard Specifications for Road and Bridge Construction, U.S. Standard Units (Inch Pound Units) CSI Format, Edition of 2002 with Changes One and Two included applies on this project as a static Specification Book.

Refer to Part II (List of Revised Standard Specifications) and Part XVI (Special Provisions) for other project specific specifications.

II. List of Revised Standard Specifications

Change One - Included in 2002 Standard Specifications

Revised August 29, 2002

Section 00570 Articles 1.2 A 69, A 71 b (deleted)

Section 00727 Articles 1.1 D; 1.5 B; 1.9; 1.10; 1.16 B, C; 1.18 B

Section 01574 Articles 1.2 B

Section 02721 Articles 1.2 D (added), H (replaced), I (deleted);1.6 B1; 2.1 A Table 3; 3.2 C

Section 02741 Articles 3.8 E 2 a, b

Section 02821 Articles 3.1 A

Section 02892 Articles 1.5 A, B

Section 02936 Articles 1.4; 1.5 C

Section 03152 Articles 1.2 P, Q; 2.2 A, B

Section 05120 Articles 1.4 A (deleted), 3.3 A

Section 16525 Articles 1.6 A, B

Change Two - Included in 2002 Standard Specifications

Revised December 19, 2002

Section 01561 Article 3.1 A

Section 02075 Article 2.7 A

Section 02372 Article 2.1 A 4

Section 02455 Article 3.3 B 2

Section 02785 Article 3.2 C

Section 02861 Article 3.3 A

Section 03055 Articles 1.2 P (inserted), 2.3 B, 2.4 (deleted), 2.7 A 1 a-e (added), 2.7 B 2

(added), 2.8 A 1 a, 2.8 A 2 (deleted), 2.9 A3, 3.2 A Table, 3.2 C, 3.7 A 3, 3.8 C 1, 3.9 A-

B, 3.10, 3.11 B 1, 3.11 B 3

Section 07922 Article 2.1 Table 1

Change Three

Revised February 27, 2003

Section 01355 Article 1.3 A 3

Section 01721 1.4 C deleted and moved to Measurement and Payment document

Section 02222 Changed title from Site Demolition-Pavement to Site Demolition - Concrete, A, 3.2 Title, 3.2 A

Section 02224 New Specification

Section 02316 1.2 A, D, I added, 1.3 added, 1.7 B, C, D, E, F, G added, 3.9 A added

Section 02455 3.3 B 2 (corrected error from change two)

Section 02721 1.2 Related Sections added, 1.3 H and I added, 1.7 B, 1.7 F deleted, 2.1 B added, 2.2 deleted, 3.1 Title changed, 3.2 B reference added, 3.2 E added

Section 02741 1.4 C6a added, 1.4 H, Table 3, 2.4 A, 2.4 C, Table 9, 2.5 B 1-3, 2.5 B 4 added, 2.5 D, 3.1 Al deleted, 3.2 C3 added, 3.7 D1, 3.9 B4, 3.9 B5 added, 3.9 E note added

Section 02744 Entire Section deleted

Section 02745 1.4 A9

Section 02785 1.2 C and D added

Section 02892 Added Articles, 1.3 N, O, Y, 1.5 D, 2.4 I, 2.5 C, D, E, 2.6 B3 - B6, 2.6 C, 2.16, 2.17, 3.11 and Revised Articles 3.5 F and Table Number, 3.5 G and Table Number

Section 02896 2.1 A, B and 3.1 A drawing number corrected

Section 16525 1.2 H

Change Four

Revised April 24, 2003

Section 00555 1.18 added Table 1

Section 01280 1.2 K

Section 01282 1.13 B added, 1.13 G 2 deleted

Section 02222 1.2 B Title Changed

Section 02231 3.5 A

Section 02705 Title Changed, 1.1 A, 1.3 added, 3.1 Title changed, 3.1 A, 3.1 D moved, 3.2 added

Section 02741 3.7 B

Section 02747 Entire Section deleted

Section 02752 1.8 E 1

Section 02753 3.1 D 5 a, 3.3 D

Section 02842 2.4A

Section 02861 2.1 I

Section 02911 3.2 A 1

Section 02931 3.2 B

Section 03392 2.1 A 8-9

Section 03921 2.1 A 1, 2.1 C

Section 03922 2.1 B 1-2

Section 03923 2.1 A-B, 3.1 B

Section 03924 2.2 A-B

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Section 03935 2.1 A, 2.1 A 2
Section 07105 2.3 A
Section 13553 1.2 C Title Changed
Section 13554 1.1 A, 1.3 C and D added, 2.1 A, 2.1 F, 2.2 D 1, 2.2 D 2 deleted, 2.2 E, 2.2 H, 2.2 H 2, 2.2 H 3 deleted and renumbered, 3.1 B 3 added, 3.1 I

III. List of Revised Standard Drawings

Change One

Revised December 19, 2002

AT 7	Polymer Concrete Junction Box Details	12/19/2002
BA 1A	Precast Concrete Full Barrier Standard Section	12/19/2002
BA 1B	Precast Concrete Full Barrier Standard Section	12/19/2002
BA 3	Cast In Place Constant Slope Barrier	12/19/2002
BA 4B	Beam Guardrail Installations	12/19/2002
BA 4C	Beam Guardrail Anchor Type I	12/19/2002
CC 6	Crash Cushion Type E Sand Barrel Details	12/19/2002
DG 3	Maximum Fill Height and End Sections for HDPE	
	And PVC Pipes	12/19/2002
DG 4	Pipe Culverts Minimum Cover	12/19/2002
EN 4	Temporary Erosion Control (Drop-Inlet Barriers)	12/19/2002
GW 1	Raised Median and Plowable End Section	12/19/2002
PV 2	Pavement Approach Slab Details	12/19/2002
SL 13	Traffic Counting Loop Detector Details	12/19/2002
SN 2	Flashing School Sign	12/19/2002
SN 4	Flashing Stop Sign	12/19/2002
SN 5	Typical Installation For Milepost Signs	12/19/2002
SN 8	Ground Mounted Timber Sign Post (P1)	12/19/2002
ST 1	Object Marker "T" Intersection and Pavement	
	Transition Guidance	12/19/2002
ST 7	Pavement Markings and Signs at Railroad Crossings	12/19/2002
SW 3A	Precast Concrete Noise Wall 1 of 2	12/19/2002
SW 3B	Precast Concrete Noise Wall 2 of 2	12/19/2002
SW 4A	Precast Concrete Retaining/Noise Wall 1 of 2	12/19/2002
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Change Two

Revised February 27, 2003

GW 2	Concrete Curb and Gutter	02/27/2003
GW 5	Pedestrian Access	02/27/2003

Change Three

Revised April 24, 2003

AT 7	Polymer-Concrete Junction Box Details	04/24/2003
CB 2	Curb Inlet Catch Basin	04/24/2003
CC 7	Grading & Installation Details Crash Cushion Type F	04/24/2003
CC 8	Grading & Installation Details Crash Cushion Type G	04/24/2003

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CC 9A	Grading & Installation Details Crash Cushion Type H	04/24/2003 (New)
CC 9B	Grading & Installation Details Crash Cushion Type H	04/24/2003 (New)
EN 2	Temporary Erosion Control (Silt Fence)	04/24/2003
GW 2	Concrete Curb and Gutter	04/24/2003
SN 12B	Ground Mounted Sign Installation Details	04/24/2003

IV. Materials Minimum Sampling and Testing

Follow the requirements of the Current Materials Minimum Sampling and Testing Manual:

Materials Minimum Sampling and Testing Manual reference can be found from the UDOT Web Site at:

http://www.dot.utah.gov/esd/Manuals/Materials/MaterialsSampling.htm

For UDOT employees the Manual can also be found on the Shared Drive at: \Shared\Engineering Services\Manuals\Materials (W drive for the Complex and R drive for the Regions)

V. Notice to Contractors



NOTICE TO CONTRACTORS

Sealed proposals will be received by the Utah Department of Transportation UDOT/DPS Building (4th Floor), 4501 South 2700 West, Salt Lake City, Utah. 84114-8220, until 2 o'clock p.m. Tuesday, July 22, 2003, and at that time the download process of bids from the USERTrust Vault to UDOT will begin, with the public opening of bids scheduled at 2:30 for SAFETY IMPROVEMENTS of NORTH OGDEN DIVIDE ROAD in WEBER County, the same being identified as Federal Aid Project No: HPP-3462(1)3.

Federal Regulations:

In conformity with the Federal-Aid Highway Act of 1968, the U.S. Department of Labor has certified the minimum wage rates to be paid on this contract. These rates are made a part of the contract documents. This Department has been advised by the Wage and Hour Division, U.S. Department of Labor, that contractors engaged in highway construction work are required to meet the provisions of the Fair Labor Standards Act of 1938, (52 Stat. 1060). This contract is subject to all appropriate Federal Laws, including Title VI of the Civil Rights Act of 1964.

Project Location: 4.938 Miles of Route: 3462 from R.P. 2.75 to R.P. 6.11

The principal items of work are as follows (for all items of work see attachment):

Post and Panel Retaining Wall Roadway Excavation (Plan Quantity) Survey

The project is to be completed: in 120 Working Days.

Other Requirements:

All project bidding information, including Specifications and Plans, can be viewed, downloaded, and printed from UDOT's Project Development Construction Bid Opening Information website, http://www.dot.utah.gov/cns/bidopeninfo.htm. To bid on UDOT projects, bidders must use UDOT's Electronic Bid System (EBS). The EBS software and EBS training schedules are also available on this website.

Project information can also be reviewed at the main office in Salt Lake City, its Region offices, and its District offices in Price, Richfield, and Cedar City.

Project Plans cannot be downloaded or printed from the website unless your company is registered with UDOT. Go to UDOT's website to register. Unregistered companies may obtain the Specifications and Plans from the main office, 4501 South 2700 West, Salt Lake City, (801) 965-4346, for a fee of \$20.00, plus tax and mail charge, if applicable, none of which will be refunded.

Prequalification of bidders is required. Prior to submitting a bid, the bidder must have on file with the Utah Department of Transportation a completed and approved contractor's application for prequalification. Department processing time is 10 working days from receipt of properly executed documentation.

As required, a contractor's license must be obtained from the Utah Department of Commerce.

Each bidder must submit a bid bond from an approved surety company on forms provided by the Department; or in lieu thereof, cash, certified check, or cashier's check for not less than 5% of the total amount of the bid, made payable to the Utah Department of Transportation, showing evidence of good faith and a guarantee that if awarded the contract, the bidder will execute the contract and furnish the contract bonds as required.

The right to reject any or all bids is reserved.

If you need an accommodation under the Americans with Disabilities Act, contact the Construction Division at (801) 965-4346. Please allow three working days.

Additional information may be secured at the office of the Utah Department of Transportation, (801) 965-4346.

Dated this 21st day of June, 2003.

VI. Use of Minority or Women Owned Banks

SPECIAL PROVISION

In the spirit of Federal Department of Transportation regulations the Utah Department of Transportation encourages all contractors and suppliers to thoroughly investigate the services offered by banks controlled and/or owned by minorities or women and to utilize their services as deemed feasible.

VII. BID CONDITIONS DISADVANTAGED BUSINESS ENTERPRISE (DBE)

"Policy Statement"

It is the policy of the Utah Department of Transportation to take all necessary and reasonable actions to ensure that Disadvantaged Business Enterprises (DBE) as defined herein shall have equal opportunity to participate in the performance of contracts financed in whole or in part with US Department of Transportation (DOT) funds under this agreement as modified herein.

"Objectives"

The objectives of this policy are to:

- 1. Ensure nondiscrimination in the award and administration of DOT assisted contracts;
- 2. Create a level playing field on which DBEs can compete fairly for DOT assisted contracts;
- 3. Ensure that the DBE program is narrowly tailored in accordance with applicable law;
- 4. Ensure that only firms that fully meet 49 CFR 26 eligibility standards are permitted to participate as DBEs;
- 5. Remove barriers to the participation of DBEs in Federal aid contracts;
- 6. Assist the development of firms that can compete successfully in the marketplace outside the DBE program; and
- 7. Provide appropriate flexibility in establishing and providing opportunities for DBEs.

"Responsibilities"

Implementation of the DBE Program is accorded the same priority as compliance with all other legal obligations incurred by the DEPARTMENT in financial assistance agreements with DOT.

1. The Civil Rights Manager shall be the DBE liaison officer, who shall have direct, independent access to the Executive Director concerning DBE program matters. The Civil Rights manager shall be responsible for implementing all aspects of the DBE program. Adequate staff will be assigned to administer the DBE program.

2. The ENGINEER is responsible for supervision of the DBE participation covered by the Contract.

DBE BID AND PERFORMANCE CONDITIONS

"Obligations"

The contractor, subcontractor, service provider, or supplier at any lower tier shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the DEPARTMENT deems appropriate.

"Assurances"

Each contract between the DEPARTMENT and the Contractor and each subcontract at any lower tier must include the following assurance:

The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the DEPARTMENT deems appropriate.

A. CONTRACT GOAL

- 1. The DEPARTMENT has determined that one or more Disadvantaged Business Enterprise (DBE) firms owned and controlled by the socially and economically disadvantaged individuals can reasonably be expected to compete for the work contained in the proposal for this project. It is, therefore, the goal of the DEPARTMENT that firms owned and controlled by the DBEs shall contract for the following percentage of work under this contract:
 - a. If the indicated DBE percent of the *CONTRACT DBE GOAL* is greater than 0.0%, complete Part A of the DBE BID ASSURANCE. Refer to Bidding Requirements, Section D, Subsection 1,a, of this Special Provision. (The commitment dollar amount up to the amount of the assigned goal is Race Conscious DBE participation. Any commitment dollar amount in excess of the assigned goal is Race Neutral Participation.)

b. If the indicated DBE percent of the *CONTRACT DBE GOAL* is 0.0% complete Part B of the DBE BID ASSURANCE. Refer to Bidding Requirements, Section D, Subsection 1,b, of this Special Provision. (Any commitment to a DBE is Race Neutral Participation.)

CONTRACT DBE G	<i>OAL</i> :	8.0	Percent

2. GOALS

a. GOAL FOR BID EVALUATION

The above entered DBE percentage is a goal for bid evaluation to determine responsiveness of the proposal as it relates to this specification. Percentages for bidding purposes shall be calculated using dollar values and quantities as shown in proposals received for this project. Bidders shall compute the percentage of their DBE commitment by dividing the dollar amount of subcontract work that is being committed to certified DBE firms by the total dollar amount of the proposal. This will be the percentage of their DBE commitment to be used by the Electronic Bidding System (EBS) software.

b. RACE CONSCIOUS GOAL

DBE participation on projects that are assigned a Goal for Bid Evaluation that is greater than 0.0% is *race conscious* and the DBE commitment becomes a contract specification upon award. The Bidder must submit with its Bid Proposal a *DBE Commitment*, prepared within the EBS software, that indicates:

- (1) Name of DBE firm
- (2) Work items to be performed
- (3) Total dollar amount of commitment

If the DBE commitment does not meet or exceed the assigned goal, the Bidder must submit with the Bid Proposal documentation of good faith efforts.

c. RACE NEUTRAL GOAL

DBE participation on projects that are assigned 0.0% Goal for Bid Evaluation is *race neutral* and does not become a contract specification upon award. The Bidder must take equal opportunity action to allow DBEs to compete for and perform on subcontracts. Only work classifications that the Bidder will subcontract need to be considered in evaluating equal opportunity action in the bid preparation. Contacts that have been made with DBE firms regarding potential work to be subcontracted and the

results of such contacts are to be submitted with the EBS prepared Bid Proposal in *Race Neutral DBE Documentation* which contains:

- (1) The work classifications that will be subcontracted.
- (2) DBE firms contacted.
- (3) Result of contact
- (4) Name of anticipated DBE subcontractor(s)
- (5) Anticipated work items to be performed by DBEs.
- (6) Anticipated dollar amount of subcontract(s).

NOTE: In the EBS (Electronic Bidding System):

Use the Quote Comparison to document item (1). Use the DBE Contact Log to document items (2) and (3). Use the DBE Commitment to document items (4), (5), and (6).

The *Race Neutral DBE Documentation* is required to document equal opportunity action and to assist UDOT with DBE reporting and DBE goal setting. Use the EBS functions in above NOTE as the Race Neutral DBE Documentation.

d. GOAL FOR CONTRACT PERFORMANCE

The Bidder's *DBE Commitment* becomes an attachment to the Bid Proposal and is a condition of award, and thereby becomes a contract specification. Upon award, this Race Conscious DBE Commitment also becomes the minimum goal for contract performance.

Commitments to DBEs that exceed the Goal for Bid Evaluation will be considered as both race conscious and race neutral. The dollar amount of the Goal for Bid Evaluation will be considered to be race conscious participation. Any dollar amounts in excess of the Goal for Bid Evaluation will be considered as race neutral participation.

It is the intent of this Special Provision that the DBE Firm(s) listed for *race conscious* participation, as a minimum level of participation, will perform to the extent indicated in the Bidder's DBE Commitment. The minimum level of DBE participation includes:

- (1) Indicated DBE firm(s),
- (2) Indicated work item(s) (bid items),
- (3) Indicated total dollar amounts.

Listed bid items shall be considered to be committed in their entirety unless Bidders designate otherwise in their DBE Commitment. If the DBE will perform only a part of the bid item, i.e., haul only, the Bidder must indicate

what part the DBE will perform (Partial Performance). If the DBE will perform only a part of the quantity of the bid item, the Bidder must indicate the estimated quantity of the work to be performed by the DBE (Partial Quantity).

Substitutions of DBE subcontractor(s), work item(s), or decreases of total dollar amount(s) as indicated in the Bidder's DBE Commitment will not be allowed without prior submission of written justification to the ENGINEER and approval of the ENGINEER and the Civil Rights Manager.

After award of a contract, substitutions will not be allowed without prior submission of a written "hold harmless" statement from the DBE.

Any change by the Contractor in the DBE Commitment requires that the change be approved by a Change Order.

Substitution of race neutral participation in excess of the Goal for Bid Evaluation requires equal opportunity efforts to substitute with other DBE participation.

DEPARTMENT generated decreases due to quantity changes in individual bid items do not require prior approval of the Civil Rights Manager—but must be fully justified by the ENGINEER at the conclusion of the project in the Explanation of Overruns and Underruns Statement. The ENGINEER's justification shall show the total estimated quantity, the final pay quantity as shown on the final estimate invoice, the quantity of the underrun, and the percent of underrun of the individual item. The explanation for the underrun shall include the reasons for the underrun and shall include as much detail as possible.

e. GOAL FOR FINAL COMPLIANCE

Percentages for final compliance shall be based on actual payments to DBEs. Overruns and under runs in individual contact items may require adjustments in the predetermined DBE percentage for a project if those items were not related to DBE performance. "The predetermined percentage for a project" refers to the percentage of the Contractor's DBE Commitment that becomes a contract specification upon award.

B. DEFINITIONS

For the purpose of this Special Provision, the following terms are defined:

- 1. <u>Contract</u> means a legally binding relationship obligating a seller to furnish supplies or services including but not limited to, construction and professional services) and the buyer to pay for them.
- 2. <u>Contractor</u> means one who participates, through a contract or subcontract (at any tier).
- 3. <u>Disadvantaged Business Enterprise or DBE</u> means a for profit small business concern.
 - a. That is at least 51 per cent owned by one or more individuals who are both socially and economically disadvantaged or, in the case of a corporation, in which 51 per cent of the stock of which is owned by one or more such individuals; and
 - b. Whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.
 - c. Whose size is limited to average annual gross receipts of \$17,425,000 over the previous three fiscal years. This amount may be adjusted for inflation from time to time by the Secretary of Transportation.

 OR

Whose size is limited to the current SBA Business size standard(s) found in 23 CFR part 121 appropriate to the type(s) of work the firm seeks to perform in DOT-assisted contracts.

d. That has been certified to DBE status by the DEPARTMENT.

4. DBE Goals mean:

- a. UDOT's annual overall goal on DOT-assisted projects for Federal fiscal year 2003 is 8.0%.
- b. 3.3% of the overall goal is a race neutral goal and reflects the level of DBE participation that would be expected absent the effects of discrimination. There is an implied DBE goal on projects with no goals (0.0%) that have subcontracting opportunities. The implied goal is the percent achievable by equal opportunity efforts.
- c. 4.7% of the goal is a race conscious goal and reflects the level of DBE participation that will be achieved in response to assigned DBE goals.

- 5. <u>DBE Joint Venture</u> means an association of a DBE firm and one or more other firms to carry out a single, for profit business enterprise, for which the parties combine their property, capital, efforts, skills, and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the contract and whose share in the capital contribution, control, management, risks, and profits of the joint venture to a degree commensurate with its ownership interest.
 - A DBE joint venture must be approved by the DEPARTMENT's Civil Rights Office prior to bid opening in order to be utilized for the satisfaction of contract DBE goals. A DBE Joint Venture application must be submitted allowing ample lead time for the Civil Rights Office to review, evaluate, and verify information provided for in the application. An interview of the applicant may be necessary at the discretion of the DEPARTMENT prior to approval of the application. If an interview is deemed necessary it will be scheduled at the convenience of all parties.
- 6. <u>Equal Opportunity Action</u>. The principle of nondiscrimination requires that individuals be considered on the basis of individual capacities and not on the basis of any characteristics generally attributed to the group.
 - If a bidder requests or accepts bids for subcontract work, the bidder will request and accept bids from DBEs in the work classifications that potentially will be subcontracted.
- 7. Good Faith Efforts means efforts to achieve a DBE goal or other requirements of this part which by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirements.
- 8. <u>Prompt Payment</u> means payment made no later than ten (10) work days after receipt of payment by the Contractor or Subcontractor, Service Provider or Supplier at any lower tier.
- 9. <u>Race Conscious</u> measure or program is one that is focused specifically on assisting only DBEs, including women-owned DBEs. UDOT must establish contract goals to meet any portion of its overall DBE goal that it does not project being able to meet using race neutral means. To ensure that the DBE program continues to be narrowly tailored to overcome the effects of discrimination, UDOT must adjust the use of contract goals as follows:
 - a. If during the course of any year it is determined that the overall goal will be exceeded, UDOT will reduce or eliminate the use contract goals to the extent necessary to ensure that the use of contract goals does not result in exceeding the overall goal.

- b. If it is determined that UDOT will fall short of its overall goal, then appropriate modifications in the use of race neutral and/or race conscious measures will be made to allow UDOT to meet the overall goal.
- 10. <u>Race Neutral</u> measure or program is one that is, or can be, used to assist all small businesses. UDOT must meet the maximum feasible portion if its overall DBE goal by using race -neutral means of facilitating DBE participation. Race neutral DBE participation includes:
 - a. Any time a DBE wins a prime contract through customary competitive procurement procedures
 - b. Is awarded a subcontract on a prime contract that does not carry a DBE goal
 - c. Is awarded a subcontract from a prime contractor that did not consider its DBE status in making the award even if there is a DBE goal.

For the purposes of this part, race-neutral includes gender-neutrality.

11. <u>Regular Employee</u> is a person who:

- a. Would be working for the DBE firm on any other subcontract with any other contractor.
- Is a permanent employee of the DBE firm
 Or
 Has been recruited through the traditional recruitment and/or employment centers
- c. Has not recently been employed by the prime contractor on the present project, another subcontractor on the present project, or the renter-lessor of equipment being used on the present project.
- d. Is not a member of a construction crew which regularly works for a non-DBE.
- e. Is not a licensed contractor who is at the time "unemployed" or "between jobs."

- 12. <u>Regular Equipment</u> is owned or leased and operated on a long term agreement and not on an *ad hoc* or contract by contract agreement.
 - a. The equipment would be used by the DBE firm on any other subcontract with any other contractor.
 - b. The equipment would be owned by the DBE firm. Or

The equipment would be leased/rented from traditional equipment lease/rental sources.

- c. The DBE firm would have a rental/lease agreement for any rented or leased equipment.
- d. The equipment <u>cannot</u> belong to:
 - (1.) Prime Contractor
 - (2.) Another subcontractor on the present project.
 - (3.) Supplier of materials being installed by the DBE firm.
- e. The equipment <u>cannot</u> come from another contractor fully operated.

13. Reasonable Bid

This is a bid the DEPARTMENT would accept if it were the only bid submitted. Generally, this is a bid within 10% of the Engineer's Estimate.

14. Responsible Bidder

A responsible bidder has the apparent ability and capacity to perform the contract requirements. In addition to normal prequalification, a responsible bidder is defined as one who has signed (manually or electronically) and submitted with the bid the DBE Bid Conditions Assurance of good faith effort included as Part I of this Special Provision certifying the intention to meet the DBE goal of a proposed contract or to continue good faith effort to do so. These goals may be met by subcontracting or leasing contracts with a DBE or purchasing material from a DBE insofar as the work or material becomes a part of a proposed contract.

15. <u>Responsive Bidder</u>

a. A responsive bidder is a bidder who unequivocally offers to provide services or supplies in conformity with the material terms of the solicitation. In addition to normal prequalification and other bidding requirements, a responsive bidder in relationship to this Special Provision is defined as one who submits evidence of proposed subcontract performance with certified DBE firms to achieve the required dollar amount necessary to achieve the percentage goal.

b. Bidders may be considered as presumptively responsive if they have failed to satisfy the advertised DBE goal set for the proposed contract but have certified in their bid that good faith efforts have been expended to meet the goal and that they will continue during the performance of the contract to locate, solicit, and involve DBE firms in contract performance. Documentation of the bidder's good faith efforts must be included with the bid package of the DEPARTMENT's review and assessment. Failure to do so shall render the bid non-responsive. The bid will be rejected by the DEPARTMENT.

16. Satisfactory Completion of a subcontract occurs when:

- a. The work has been satisfactorily completed in all respects under the Contract.
- b. The Contractor and the subcontractor have notified the ENGINEER in writing that the work of the subcontractor has been completed.
- c. The Engineer will be given a reasonable length of time to check quantities if necessary. Checking quantities does not guarantee the absolute correctness of quantities.
- d. The Contractor and the subcontractor have satisfactorily executed and delivered to the ENGINEER all documents, certificates and proofs of compliance required by the Contract. The satisfactory execution and delivery of these documents, certificates and proofs of compliance to the ENGINEER is a material requirement of the contract.
- e. The work of the subcontract is accepted in writing by the ENGINEER.
- f. Satisfactory Completion refers only to payment of retainage and accrued interest. A determination of Satisfactory Completion and payment in full for work performed does not relieve the contractor nor the subcontractor from any contractual obligation.
- 17. <u>Satisfactory Performance</u> means work performed and materials furnished in conformity with the plans and specifications.
- 18. <u>Service Provider</u> means a broker or a middle man. A businessperson who buys or sells for another in exchange for a commission.
- 19. <u>Socially and Economically Disadvantaged Individuals</u> means any individual who is a citizen (or lawful admitted permanent resident) of the United States and who is:

- a. Any individual who the DEPARTMENT finds to be a socially and economically disadvantaged individual on a case-by-case basis.
- b. Any individual in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:
 - (1) "Black Americans," which includes persons having origins in any of the black racial groups of Africa;
 - (2) "Hispanic Americans," which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American or other Spanish or Portuguese culture or origin, regardless of race;
 - (3) "Native Americans," which includes persons who are American Indians, Eskimos, Aleuts, or Native Hawaiians;
 - (4) "Asian-Pacific Americans," which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S.Trust Territories of the Pacific Islands, (Republic of Palau), the Commonwealth of the Northern Mariana Islands, Macao, Fiji, Tonga, Kirbati, Juvalu, Nauru, Federated States of Micronesia, or Hong Kong;
 - (5) "Subcontinent Asian Americans," which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka.
 - (6) Women.
 - (7) Any additional groups whose members are designated as socially and economically disadvantaged by the SBA, at such time as the SBA designation becomes effective.

20. Subcontractor

A subcontracting arrangement is generally considered to exist when a person or firm assumes an obligation to perform a part of the contract work and the following conditions are present.

- a. The person or firm performing the work is particularly experienced and equipped for such work.
- b. Compensation is related to the amount of work accomplished rather than being on an hourly basis.
- c. Choice of work methods, except as restricted by the specifications, and the furnishing and controlling of labor and equipment are exercised by the subcontractor with only general supervision being executed by the prime contractor.
- d. Personnel involved in the operation are under the direct supervision of the subcontractor and are included on the subcontractor's payroll.

All conditions involved shall be considered and no one condition alone will normally determine whether a subcontract actually exists. In all cases, a DBE subcontractor must be an independent organization, and the ownership and control by the socially and economically disadvantaged individual(s) must be real and continuing. The prime contractor, a subcontractor, or a supplier shall not be responsible for the various operating and management activities of a DBE firm.

21. Supplier

Provides or furnishes materials, goods or services that may be incorporated into the project. The supply transaction is to be documented by an appropriate purchase agreement which includes the required provisions for Federal-aid construction projects.

C. <u>DETERMINATION OF DBE CONTRACTOR'S ELIGIBILITY BY THE DEPARTMENT</u>

- 1. Any Contractor may apply to the DEPARTMENT for status as a DBE. Applications shall be made on forms provided by UDOT entitled "UTAH DEPARTMENT OF TRANSPORTATION APPLICATION FOR DETERMINING DISADVANTAGED BUSINESS ENTERPRISE (DBE) ELIGIBILITY, SCHEDULE A UDOT FORM R-816" or "Information for Determining DBE Joint Venture Eligibility," Form No. R-817. Application need not be made in connection with a particular bid. Only work contracted to certified DBE prime contractors or subcontractor to firms that have applied for and have been granted status as a DBE by the DEPARTMENT shall be considered toward contract goals as established in Subsection A.
- 2. It shall be the Contractor's responsibility to submit a DBE application so that the DEPARTMENT has time to review it. The DEPARTMENT will review applications in a timely manner but is not committed to approve DBE status within any given period of time. The Civil Rights Office must have ample lead time to review, evaluate, and verify information provided with a application.
- 3. The DEPARTMENT shall maintain a directory of DBE Contractors, vendors, service providers and suppliers that is updated as changes occur for the purpose of providing a reference source to assist any bidder in meeting the requirements of this bid condition. Bidders must use the most current DBE information available on the web site when submitting bids. A current DBE directory representing approved DBE Contractors is available through the UDOT Civil Rights Office, and also on the Internet at (click on this link):

http://www.udot.utah.gov/cns/Civil Rights/dbedir.pdf

An electronic file of the DBE Directory is available for downloading to use in the Electronic Bidding System (EBS) at the following URL (click on this link):

www.udot.utah.gov/cns/bidopeninfo.htm

4. In meeting the requirements of this bid condition, bidders are in no way limited to the DBE Directory referred to in 3 above in seeking out and negotiating with the DBE Contractors and determining which items of work shall be subcontracted to DBE Contractors. Bidders shall exercise their own judgments in selecting any subcontractor to perform any portion of the work.

DBE status must be granted to any DBE Contractor or DBE Joint Ventures by the DEPARTMENT prior to bid opening. DBE credit will not be allowed toward *race conscious* goals for a firm or joint venture that has not been DBE certified by the DEPARTMENT.

D. BIDDING REQUIREMENTS

All bidders must satisfy the bidding requirements of this part. A DBE prime contractor's performance does not count toward fulfilling the DBE goal. A prime bidder who is a DBE contractor shall meet the DBE goal by using DBE subcontractors or by using good faith efforts.

1. DBE Bid Assurance

a. Race Conscious Goal

For a bid with a DBE goal greater than 0.0% to be considered responsive, *Part* A of the DBE Bid Assurance must be completed and included in the BID PROPOSAL, certifying that they will meet or exceed the Goal for Bid Evaluation established in Subsection A, or that they fail to meet the goal but have and will put forth good faith effort to meet or exceed the goal of the DBE program. *Part A* of the DBE Bid Assurance will be completed by the EBS software based upon the entry of the DBE Commitment and/or the Good Faith Documentation into EBS. In either event, the Contractor shall continue efforts to consider and utilize DBE firms during the performance of the contract.

b. Race Neutral Goal

For a bid with a DBE goal of 0.0% to be considered responsive, *Part B* of the DBE Bid Assurance must be included in the BID PROPOSAL certifying that the Bidder has utilized equal opportunity action to allow DBE's to compete for and perform on subcontracts. *Part B* of the DBE Bid Assurance will be completed based upon the following information entered into EBS:

(1) Bids with no subcontracting opportunities

Bidders who intend to do all the work with their own organization will indicate this in EBS on the Bid Submission Checklist and Forms window. EBS will subsequently indicate on Part B of the DBE Bid Assurance that the Bidder does not intend to sublet a portion of the contract work.

After the award of the bid, in the event that a Contractor indicates that he does not intend to sublet any work and subsequently determines to sublet a portion of the work, the Contractor:

- (a) must justify why subcontract quotes were not a part of the Bid Proposal,
- (b) must utilize equal opportunity action to allow DBEs to compete for and perform on the work to be sublet,
- (c.) must submit the required Race Neutral Documentation with the proposed subcontract.

NOTE: The Contractor may use the 'DBE Contact Log' and 'Quote Comparison' functions in EBS to develop the above requirements for documentation.

(2) Bids with subcontracting opportunities

Race Neutral measure or program is one that is, or can be, used to assist all small businesses. UDOT must meet the maximum feasible portion if its overall DBE goal by using race -neutral means of facilitating DBE participation.

Bidders who solicit non-DBE subcontract quotes will utilize equal opportunity action to allow DBEs to compete for and perform on subcontracts. If the Bidder has selected 'Intend to Sublet' on the 'Bid Submission Checklist and Forms' window in the EBS software, Part B of the DBE Bid Assurance will indicate that the Bidder intends to sublet a portion of the contract work.

The results of the equal opportunity actions will be included with the EBS prepared Bid Proposal as a *Race Neutral Documentation*. Part B of the Bid Assurance Form will indicate the existence of any of the following types of Race Neutral Documentation that the Bidder has entered into EBS:

- (a) DBE Commitment
- (b) DBE Contact Log
- (c) Quote Comparison

In either event, the Contractor shall continue efforts to consider and utilize DBE firms during the performance of the contract.

2. DBE Commitment

For a bid to be considered responsive, Bidders shall submit the following information regarding DBE compliance with the EBS prepared Bid Proposal:

Submit a DBE Commitment of work that will be subcontracted to certified DBE firm(s) as listed in the DEPARTMENT's <u>Disadvantaged Business Enterprise</u> <u>Directory</u> or DBE firms that have been approved by the DEPARTMENT prior to bid opening.

- a. The names of DBE firms that will participate in the contract;
- b. A specific description of the work each named DBE firm will perform (list specific bid items). Listed bid items shall be considered to be committed in their entirety unless Bidders designate otherwise in their DBE Commitment.
 - (1) If mobilization is a bid item that is partially committed to a DBE, indicate the dollar amount of the DBE mobilization.
 - (2) If a partial quantity is committed to a DBE, indicate the quantity committed to the DBE.
 - (3) If a partial performance of an item is committed to a DBE, explain what part of the item the DBE will perform;
- c. The dollar amount of participation by each named DBE firm;
- d. If the contract goal is not met, evidence of good faith efforts.

The DBE Commitment is to be included in the bid prepared within, and said information will be kept confidential and will not be reviewed unless the Contractor is otherwise determined to be the low Bidder or the DEPARTMENT elects to review said information in making its determination as to award of the contract.

3. Race Neutral Commitment

For a bid to be considered responsive, Bidders shall submit the following information regarding equal opportunity compliance with their EBS prepared Bid Proposal:

Submit a Race Neutral DBE Commitment of work that will be subcontracted to certified DBE firm(s) as listed in the DEPARTMENT's <u>Disadvantaged Business</u> <u>Enterprise Directory</u> or DBE firms that have been approved by the DEPARTMENT prior to bid opening. The DBE Commitment will include:

a. The bid item(s) or work classification(s) that will be subcontracted;

- b. The DBE firms that have been contacted. A reasonable number of DBEs available to perform the anticipated subcontract work must be contacted. The DBE firms must be given a reasonable amount of time to develop subcontract quotes.
- c. The results of the contacts with the DBE firms
- d. Name(s) of anticipated DBE subcontractor(s)
- e. Anticipated work items to be performed by DBE(s)
- f. Anticipated dollar amount of subcontract(s).

A specific description of the work each named DBE firm will perform (list specific bid items). Listed bid items shall be considered to be committed in their entirety unless Contractors designate otherwise in their DBE commitment.

- (1) If mobilization is a bid item that is partially committed to a DBE, indicate the dollar amount of the DBE mobilization.
- (2) If a partial quantity is committed to a DBE, indicate the quantity committed to the DBE.
- (3) If a partial performance of an item is committed to a DBE, explain what part of the item the DBE will perform;

NOTE: In the EBS (Electronic Bidding System):

Use the quote comparison to document item (a)
Use the contact log to document items (b) and (c).
Use the DBE commitment to document items (d), (e), and (f).

The *Race Neutral Documentation* submitted in the EBS prepared bid, will be kept confidential and not reviewed unless the Contractor is otherwise determined to be the low Bidder or the DEPARTMENT elects to review said information in making their determination as to award of the contract.

4. DBE Written Confirmation

Low Bidder shall submit to the Director of Construction & Materials within three (3) work days after the bid opening written confirmation from each DBE that it is participating in the contract as provided in the Prime Contractor's DBE Commitment or Race Neutral Documentation. The written confirmation shall include the following information:

a. A description of the work that will be performed (list specific bid items).
 Listed bid items shall be considered to be committed in their entirety unless
 Contractors designate otherwise in their DBE commitment.

- (1) If mobilization is a bid item that is partially committed, please confirm the dollar amount of the mobilization to be performed.
- (2) If a partial quantity is committed, confirm the quantity to be performed.
- (3) If a partial performance of an item is committed, confirm what part of the item will be performed.
- (4) Unit bid prices for each bid item that is committed to a DBE.
- (5) Total dollar amounts (mathematical extensions) for each bid item that is committed to a DBE
- b. The dollar amount of participation by each named DBE firm.

5. Good Faith Efforts

Bidders who fail to meet the DBE goal for bid evaluation must demonstrate with documentary evidence that they made good faith efforts to do so. Bidders are required to include the Good Faith Efforts Documentation with the EBS prepared Bid Proposal. The said information will be kept confidential and not reviewed unless the Bidder is otherwise determined to be the low Bidder or UDOT and authorized representatives elect to review said information in making their determination as to award of the contract. For the bid to be considered responsive, Bidders shall include with the BID PROPOSAL specific documentary evidence that good faith efforts have been made to meet the goal.

Attached hereto and marked Exhibit A, and by this reference made a part hereof, is a list of actions that may be used to prove the kinds of efforts prospective Bidders should consider in their attempts to demonstrate good faith efforts. The list of actions, as contained in Exhibit A, is not intended to be an exclusive list of efforts that a prospective Bidder may wish to consider in demonstrating good faith efforts to satisfy DBE participation requirements. The determination of good faith efforts shall be based upon the information and documentation of the actions supplied by the Bidder with the bid proposal. The DEPARTMENT reserves the right to investigate and verify such information or to request the low dollar Bidder to clarify information submitted at the time of bid.

6. Award of the Contract

The award of the contract, if awarded, will be made to the apparent successful responsive, responsible Bidder who submitted a reasonable bid for the contract and has complied with this Subsection D.

7. Administrative Reconsideration

Good faith efforts as used herein shall be determined on a case by case basis. If it is determined that the apparent low Bidder has failed to meet the requirements of Exhibit A, the bidder will be provided an opportunity for administrative reconsideration.

- a. The reconsideration will be made by an official who did not take part in the original determination.
- b. The Bidder will have the opportunity to provide to written documentation or argument concerning the issue of whether it met the goal or made adequate good faith efforts to do so.
- c. The Bidder will have the opportunity to meet in person with the reconsideration official to discuss the issue of whether it met the goal or made adequate good faith efforts to do so.
- d. The Bidder will be notified in writing of the decision and the basis for the decision.
- e. The reconsideration decision is administratively final and is not appealable to FHWA nor to the DOT.

E. COUNTING DBE PARTICIPATION TOWARD GOALS FOR BID EVALUATION

1. The DEPARTMENT will recognize and grant DBE credit toward the goal for bid evaluation (*race conscious* goals) for work committed to DBE subcontractors ONLY in the types of work for which DBE certification has been granted by the DEPARTMENT prior to bid opening. It is necessary that all bidders refer to the DEPARTMENT's Disadvantaged Business Directory for direction and guidance. A current copy of the DBE directory is available through the Civil Rights Office and on the Internet at (click on this link):

www.udot.utah.gov/cns/Civil Rights/dbedir.pdf

An electronic file of the DBE Directory is available for downloading to use in the Electronic Bidding system (EBS) at the following URL (click on this link):

www.udot.utah.gov/cns/bidopeninfo.htm

2. The DEPARTMENT will grant DBE credit toward *race neutral* goals for work performed by firms who are not DBE certified prior to bid opening or who bid types of work for which DBE certification has not been granted by the DEPARTMENT prior to bid opening but subsequently are granted DBE certification.

3. Commitments to DBEs that exceed the Goal for Bid Evaluation will be considered as both race conscious and race neutral. The dollar amount of the Goal for Bid Evaluation will be considered to be race conscious participation. Any dollar amounts in excess of the Goal for Bid Evaluation will be considered as race neutral participation.

F. COUNTING DBE PARTICIPATION TOWARD GOALS FOR PERFORMANCE

Subcontracts to DBEs that exceed the *Goal For Bid Evaluation* will be considered in part as race conscious participation and in part as race neutral participation. Any dollar amounts in excess of the *Goal For Bid Evaluation* will be considered as race neutral participation.

It is intended that the Contractor shall utilize the subcontractors designated in the DBE Commitment in the performance of the contract. Any changes in the Contractor's DBE Commitment, such as substitution of a DBE subcontractor, substitution of contract items, or decrease in total dollar amount must be approved by the DEPARTMENT and must be covered by a Change Order. Unauthorized substitutions or eliminations may result in the imposition of sanctions. Failure to meet the Goal for Performance, that is established at the time of award by the Contractor's DBE Commitment, without adequate justification, including concurrence of the ENGINEER and Civil Rights Manager, shall result in the imposition of sanctions as provided in Part I of this Special Provision.

- 1. Only the value of the work actually performed by the DBE will count toward DBE goals.
- 2. Contractors may count toward their contract goals a portion of the total dollar value of a contract with a joint venture eligible under the standards of this bid condition equal to the percentage of the ownership and controls of the DBE partner in the joint venture.
- 3. The ENGINEER will recognize and grant DBE credit for work subcontracted and performed by DBE subcontractors <u>ONLY</u> in the types of work for which DBE certification has been granted by the ENGINEER prior to bid opening. It is necessary that all Bidders refer to DEPARTMENT's Disadvantaged Business Directory for direction and guidance. A current copy of the DBE directory is available through the Civil Rights Office and on the Internet at (click on this link):

http://www.udot.utah.gov/cns/Civil Rights/dbedir.pdf

An electronic file of the DBE Directory is available for downloading to use in the Electronic Bidding system (EBS) at the following URL (click on this link):

www.udot.utah.gov/cns/bidopeninfo.htm

- 4. Contractors may count toward their goals only the value of the work actually performed by the DBE toward the DBE goals.
 - a. Work performed by the DBE's own forces using "regular employees and "regular equipment."
 - b. The cost of supplies and materials obtained and purchased by the DBE and equipment leased for the work of the contract.
 - c. Work that a DBE subcontracts to a lower tier DBE firm.
- 5. Contractors may not count toward the DBE goals:
 - a. Supplies and material purchased and equipment leased by the DBE from the prime Contractor or its affiliates or another subcontractor on the project.
 - b. Work that a DBE subcontracts to a lower tier non-DBE firm.
- 6. Contractors may count toward their goals only expenditures to a DBE that performs a commercially useful function in the work of the contract.
 - a. A DBE performs a "commercially useful function" when it is responsible for the execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself.
 - b. The DEPARTMENT shall evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and other relevant factors.
 - c. A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, the DEPARTMENT must examine similar transactions, particularly those in which DBEs do not participate.

- d. A DBE does not perform a commercially useful function if it does not perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, or the DBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involved.
- 7. The DEPARTMENT shall use the following factors in determining whether a DBE trucking company is performing a commercially useful function:
 - a. The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract and there cannot be a contrived arrangement for the purpose of meeting DBE goals.
 - b. The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
 - c. The DBE receives credit toward the DBE goals for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.
 - d. The DBE may lease trucks from another DBE firm, including an owneroperator who is certified a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
 - e. The DBE may lease trucks from a non-DBE, including an owner-operator. The DBE does not receive credit for the total value of the transportation provided by the lessee, because the services are not provided by a DBE. Only the fee or commission received by the DBE counts toward the DBE goals.
 - f. For purposes of this part (7), a lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.
- 8. Contractors may count expenditures with DBEs for materials or supplies as provided in the following:
 - a. If the materials or supplies are obtained from a DBE manufacturer, 100 percent of the cost of the materials or supplies counts toward DBE goals.

For purposes of this paragraph, a manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications.

b. If the materials or supplies are purchased from a DBE regular dealer, 60 percent of the cost of the materials or supplies counts toward DBE goals.

For purposes of this paragraph, a regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.

- (1) To be a regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question.
- (2) A firm may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating or maintaining a place of business if the firm both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement and not on an *ad hoc* or contract-by-contract basis.
- (3) Packagers, brokers, manufacturers representatives, or other persons or firms who arrange, or expedite, transactions are **not** regular dealers.
- (4) A DBE trucking company that picks up a product from a manufacturer or regular dealer and delivers the product to the Contractor performs a delivery service. Credit will **not** be given based on a percentage of the cost of the product; credit will be allowed only for the cost of the transportation service.
- 9. If the materials or supplies are purchased from a service provider, the fees or commission charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies, count toward the DBE goals.

A Service Provider is a business which is neither a manufacturer nor a regular dealer but simply transfers title of a product from manufacturer to ultimate purchaser or a firm that puts a product into a container for delivery.

a. Only the fees, commissions, or transportation performed by the DBE service provider count toward the DBE goals.

b. No portion of the cost of the materials and supplies count toward the DBE goals.

Documentary evidence of the supply agreements, i.e., sales contract, purchase order, etc., shall be submitted to the Resident Engineer or Consultant Engineer at the Preconstruction Conference. The agreement shall set forth the estimated quantities, unit prices, total dollar amounts, material guarantees, delivery, and payment requirements including the requirements listed part E, 4, e, of this DBE Special Provision.

10. Prompt payment for the work accomplished is an integral part of the concept of commercially useful function.

See Section F, Subsection 6,a for a definition of "commercially useful function."

G. CONTRACTOR'S RESPONSIBILITY

- It is the Contractor's responsibility to determine the level of professional competence and financial responsibility of any proposed DBE subcontractor. The Contractor shall ascertain that the proposed DBE subcontractor is particularly experienced and equipped for the work of the subcontract.
- It is the Contractor's responsibility to monitor and assure that DBE's listed to fulfill DBE goals perform a commercially useful function.

H. DBE SUBCONTRACTOR'S FAILURE TO PERFORM SUCCESSFULLY

If, during the performance of the contract, the Prime Contractor determines that a DBE subcontractor is unable to perform successfully, the Contractor shall make good faith efforts to replace the DBE subcontractor with another DBE to fulfill the Goal for Bid Evaluation. For Race Conscious DBE participation, the Contractor shall consider the uncompleted DBE committed work items as well as other work items as a part of the good faith efforts. All substitutions of DBE subcontractors shall receive prior approval by the DEPARTMENT.

The Contractor shall not substitute DBE subcontractor(s), work item(s), nor decrease dollar amount(s) as indicated in the Contractor's DBE Commitment without prior submission of written justification to the ENGINEER and without prior approval of the ENGINEER and the Civil Rights Manager.

The Contractor shall not substitute DBE subcontractor(s), work item(s), nor decrease dollar amount(s) as indicated in the Contractor's DBE Commitment Substitutions without prior submission of a written statement from the DBE consenting to the substitution or decrease and holding the ENGINEER harmless for approving the substitution.

Unauthorized substitutions of the DBE(s), underruns of work item(s), or decreases in dollar amount(s) may result in the imposition of sanctions as allowed under Section I.

UDOT reserves the right to authorize completion of the work that was subcontracted to a DBE who is unable to perform successfully by either of the following methods:

- 1. Approve, at no additional cost to the DEPARTMENT, a replacement DBE subcontractor and, when appropriate, modify the contract to provide for reasonable extra time necessary to obtain a DBE replacement at no additional cost to the DEPARTMENT.
- 2. Direct the Contractor to perform at unit bid prices. In the event this option is selected, the percentage DBE goal will be adjusted as may be appropriate.

I. SANCTIONS

1. The Contractor's DBE Commitment becomes a 3 part commitment comprised of the DBE Contractor(s), work item(s) and dollar amount(s). The Commitment becomes a contract specification upon award of the contract and becomes the minimum goal for contract performance.

If the Contractor fails to achieve the minimum goal, established in the contract at the time of the award of the contract or later modified, the contract payments shall be reduced as a liquidated damage and not as a penalty by an amount equal to the dollar amount of work not performed by the DBE. The dollar amount of any sanction will be computed using the unit prices indicated in the DBE subcontract

Exceptions:

- a. Any authorized adjustment in the DBE Commitment that has been approved by the ENGINEER and Civil Rights Manager.
- b. Race neutral participation.

2. The ENGINEER shall deduct maximum points for *Compliance with EEO* when completing the *Contract Performance Report*.

J. RECORD KEEPING

- 1. DBEs shall maintain records of payment received under this bid condition. DBEs shall submit to the ENGINEER within 10 work days after receipt copies of progress payments received from the prime Contractor or subcontractor if the DBE is a lower tier subcontractor:
 - a. For each committed bid item:
 - (1) The quantity committed toward the DBE goal
 - (2) The quantity performed by the DBE to the date of the payment
 - b. Total dollar amount earned to the date of the payment
 - c. The total amount paid to the date of the payment.
- 2. The Contractor shall maintain records of payment under this bid condition. At the completion of the project, the Contractor will submit to the ENGINEER a certificate in the form of an affidavit for each DBE firm participating on the Project. The Affidavit will be in the form of a spread sheet and will include for each committed DBE subcontractor:
 - a. For each committed bid item:
 - (1) The quantity committed toward the DBE goal
 - (2) The total quantity performed on the project
 - (3) The quantity performed by the DBE
 - (4) The dollar amount paid to the DBE
 - b. Total dollar amount committed toward the DBE goal
 - c. Total dollar amount earned
 - d. Interest earned from escrow and from late payment`
 - e. The total amount paid
 - f. The dollar amount of money retained.

If it appears that the DBE goals will not be met, the Contractor's retained amount may not be reduced to one and one half percent. The DEPARTMENT shall retain necessary funds until the Contractor complies with this contract specification.

DBE firms listed in the original DBE Commitment or later modified with the DEPARTMENT approval shall be paid in full prior to the DEPARTMENT processing the final payment. The Contractor shall submit with the signed, final estimate invoice, a certificate in the form of an affidavit listing all DBEs that engaged in this contract and report the total dollar amount paid to each. The affidavit(s) must be submitted to the DEPARTMENT on the Contractor's letterhead and must be dated and signed by a responsible official legally representing the Contractor.

- 3. The DEPARTMENT must create and maintain a Bidders list consisting of all firms bidding on prime contracts and bidding or quoting subcontractors on DOT-assisted projects. For every firm, the following information must be submitted annually:
 - a. Firm name
 - b. Firm address
 - c. Firm's status as a DBE or non-DBE
 - d. Age of firm
 - e. Annual gross receipts of the firm.

Every firm bidding or quoting as a prime or subcontractor at any level on DOT-assisted projects must register annually with UDOT.

NOTE: Items (a) and (b) should be completed in the EBS software by using the 'Quote Comparison' and submitted with your bid.

- 4. With the bid or no later than 10 work days after bid opening date, each and every prime bidder must submit to The DEPARTMENT a list of all firms bidding and/or quoting as subcontractors, service providers or suppliers.* The Prime Bidder must also submit for each and every firm sub-quoting the following information:
 - a, Firm Name
 - b. Firm address
 - c. Work classification(s) bid by subcontractor, service provider or supplier:
 - (1) Building
 - (2) Concrete Miscellaneous and flatwork, etc.
 - (3) Concrete Structural
 - (4) Demolition
 - (5) Electrical
 - (6) Engineering Consultants
 - (7) Engineering Design

- (8) Equipment Purchases
- (9) Equipment Rentals
- (10) Excavation
- (11) Fence
- (12) Grading
- (13) Guardrail
- (14) Hauling Earth or Other Materials
- (15) Landscaping
- (16) Lighting
- (17) Miscellaneous
- (18) Painting Striping & Messages
- (19) Painting Structural
- (20) Paving Asphalt, Highway
- (21) Paving Concrete
- (22) Paving Miscellaneous
- (23) Paving Rotomilling
- (24) Pipe Culverts
- (25) Reconstruction
- (26) Saw & Seal
- (27) Signs Permanent
- (28) Signs Temporary or traffic control
- (29) Steel Reinforcing
- (30) Steel Structural
- (31) Supplier Manufacture
- (32) Supplier Regular Dealer
- (33) Supplier Service Providers
- (34) Surveying
- (35) Traffic Signals

*NOTE: This requirement can be met with the 'Quote Comparison' function in EBS. The report must be printed and faxed to the Civil Rights Department at (801) 965-4101.

K. PROMPT PAYMENT

THIS SECTION APPLIES TO ALL PRIME CONTRACTORS, ALL SUBCONTRACTORS, AND ANY LOWER TIER SUBCONTRACTORS, AND ALL SUPPLIERS. Refer to CFR 49 Part 26.29

PART 1 GENERAL

1.1 SECTION INCLUDES

This Section applies to prime Contractors, all subcontractors, all service providers and all material suppliers, and any lower tier subcontractors, service providers, and suppliers.

1.2 PROMPT PAYMENT TO SUBCONTRACTORS, MATERIAL SUPPLIERS AND SERVICE PROVIDERS - PROGRESS PAYMENTS

- A. Include in subcontract, service or purchase agreement language agreeing to pay as promptly as or sooner than required by this specification.
- B. Pay subcontractor, service provider, or material supplier for satisfactory performance of the subcontract, service or material supply agreement no later than 10 work days after receipt of payment.
- C. Submit to the Engineer within 5 work days after paying subcontractor(s), service providers, or material supplier(s), a certified payment statement in the form of an affidavit certifying that the total dollar amount paid to each subcontractor, service provider or supplier that the payment has been made promptly, and that the dollar amount paid is the total amount due for work or services performed or materials purchased during the pay period. Contractor is required to submit the affidavit on Contractor's letterhead and include the signature of a responsible official legally representing the Contractor.

1.3 PAYMENT TO SUBCONTRACTORS, SUPPLIERS AND SERVICE PROVIDERS – RETAINED MONEY AND ACCRUED INTEREST

- A. Include in subcontract, service or purchase agreement language agreeing to pay retained money and accrued interest upon satisfactory completion of the work of subcontract, service or purchase agreement.
- B. Pay retained money and accrued interest to subcontractor, service or material provider no later than 25 work days after satisfactory completion of the work of subcontract. service or purchase agreement.
- C. Payment of retained money and accrued interest must be paid even if the Contractor has not received payment from the Department.

- D. Submit to the Engineer within 5 work days after paying subcontractor, supplier, or service provider a certified payment statement in the form of an affidavit certifying that the total amount paid is the total amount of retained money and interest due to the subcontractor, service provider or supplier. Provide a signed affidavit by a responsible official legally representing the Contractor, on Contractor's letterhead.
- E. A determination of satisfactory completion and payment of retained money and accrued interest does not relieve the Contractor, subcontractor, service provider nor supplier from any contractual obligation.

1.4 DELAY OF PAYMENT

- A. Delay payment to subcontractor, service provider, or supplier, only for good cause, with prior written notice to subcontractor, service provider or supplier and with prior written approval of the Engineer.
- B. Give subcontractor, service provider or supplier time to correct deficiencies before estimated cut-off date.
- C. Not giving notice to subcontractor, service provider, or supplier nor receiving written approval from Engineer will be considered as implied consent to pay promptly.
- D. Engineer withholds from progress payment, delayed payments.
- E. Include in subcontract, service and supply agreements, language providing for the use of appropriate alternative dispute resolution mechanisms to resolve payment disputes.
- F. Department holds in escrow disputed funds until the dispute is resolved.

1.5 PENALTIES FOR FAILURE TO MAKE PROMPT PAYMENT

- A. Department will not reimburse for work performed by subcontractors, service providers nor materials delivered by suppliers unless and until the Contractor ensures that subcontractors, service providers and suppliers are promptly paid for work performed or materials delivered.
 - 1. Engineer deducts the dollar amount due but not paid to subcontractor, service provider or supplier from the next progress payment.
 - 2. Engineer may deduct an equal amount from the Contractor's payment.
- B. Department considers the failure to pay promptly an indication of a lack of financial fitness.
 - 1. Forfeit the privilege of bidding on the Department's projects as a prime Contractor until subcontractors, service providers or suppliers are paid.

- 2. Forfeit the privilege of having a subcontract, supply or purchase agreement approved to perform as a subcontractor, service provider or supplier on the Department's projects until subcontractors, service providers or suppliers are paid.
- C. Department employs other mechanisms, consistent with this part and applicable state and local law, to ensure that DBEs, other Contractors, service providers and suppliers are fully and promptly paid.

1.6 OVERPAYMENT BY ENGINEER

- A. If the Engineer overpays for work or services performed or materials delivered, the Department deducts the dollar amount of the overpayment from future payments to the Contractor.
- B. The subcontractor, service provider or supplier is responsible to keep records and to know the quantity of work or services performed or materials delivered. If overpayment is made to a subcontractor, service provider or material supplier, the subcontractor, service provider or material supplier immediately notifies the Contractor and the Department of the overpayment.
- C. If prompt payment results in overpayment, the subcontractor, service provider or supplier promptly repays the Contractor the amount of the overpayment. If prompt repayment is not made to the Contractor, the prompt payment penalties of this specification applies to subcontractor or supplier.

Exhibit A

Suggested Actions and Required Documentation to Demonstrate Good Faith Efforts to Comply With DBE Requirements

A Bidder must show that it took necessary and reasonable steps to achieve a DBE goal which, by their scope, intensity, and appropriateness, can reasonably be expected to fulfill the program requirement. The efforts employed should be those that would be taken if a Bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract. Goal. Mere *pro forma* efforts are not good faith efforts to meet the DBE contract requirements.

Documentary evidence of each action taken must be submitted with the Bid Proposal.

The following is taken, with some modification, from CFR 49 Part 26, Appendix A. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive.

GUIDANCE CONCERNING GOOD FAITH EFFORTS

- I. When the DEPARTMENT establishes a contract goal on a Federal aid contract, a Bidder must, in order to be responsive, make good faith efforts to meet the goal. The Bidder can meet this requirement in either of two ways:
 - A. The Bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose.
 - B. If it doesn't meet the goal, the Bidder can document adequate good faith efforts. This means that the Bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.
- II. In any situation in which the DEPARTMENT has established a contract goal, CFR 49, Part 26 requires UDOT to use the good faith efforts mechanism of this part. It is up to the DEPARTMENT to make a fair and reasonable judgment whether a Bidder that did not meet the goal made adequate good faith efforts. It is important for the DEPARTMENT to consider the quality, quantity, and intensity of the different kinds of efforts that the Bidder has made. The efforts employed by the Bidder should be those that one could reasonably expect a Bidder to take if the Bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. The DEPARTMENT emphasizes, however, that its determination concerning the sufficiency of the firm's good faith efforts is a judgment call: meeting quantitative formulas is not required.
- III. The U. S. Department of Transportation also strongly cautions the DEPARTMENT against requiring that a Bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the Bidder makes an adequate good faith efforts showing. This rule specifically prohibits UDOT from ignoring bona fide good faith efforts.
- IV. The following is a list of types of actions which UDOT should consider as part of the Bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.
 - A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The Bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The Bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

- B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime Contractor might otherwise prefer to perform these work items with its own forces.
- C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- D. Negotiating in good faith with interested DBEs.
 - (1) It is the Bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.
 - (2) A Bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration.
 - (a) The fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable.
 - (b) No specific price differential has been established by 49 CFR 26. This approach allows flexibility.
 - (c) Along with the reasonableness of the cost necessarily comes the fact that prime Contractors are not expected to bear unreasonable costs.
 - (d) Any burden that a non-DBE subcontractor might face is also limited by the reasonableness of competing bids.
 - (3) The ability or desire of a prime Contractor to perform the work of a contract with its own organization does not relieve the Bidder of the responsibility to make good faith efforts. Prime Contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.
 - (4) The ability or desire of a prime Contractor to bundle the work of a subcontractor who wishes to perform all the work of the subcontract with its own organization does not relieve the Bidder of the responsibility to require a subcontractor to make good faith efforts. Subcontractors are not

required to accept higher quotes from lower tier DBEs if the price difference is excessive or unreasonable.

- E. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The Contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the Contractor's efforts to meet the project goal.
- F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
- G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
- H. Effectively using the services of available minority/women community organizations; minority/women Contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

NOTE: The DBE 'Contact Log' in EBS, submitted as part of the Bid Proposal, can be used to document the following efforts:

IV. A. IV. C.

IV. D. (1)

The 'Quote Comparison' in EBS, submitted as part of the Bid Proposal, can be used to document the following efforts:

IV. B. IV. D. (3)

V. In determining whether a Bidder has made good faith efforts, the DEPARTMENT may take into account the performance of other Bidders in meeting the contract. For example, when the apparent successful Bidder fails to meet the contract goal, but others meet it, UDOT may reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder could have met the goal. If the apparent successful Bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other Bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful Bidder having made good faith efforts.

Submit with the Bid Proposal documentary evidence to prove that good faith efforts were accomplished:

- 1. Submit copies of all solicitations: correspondence, faxes, advertisements, telephone logs with dates, times, names of persons contacted, nature of conversation, DBEs' responses, and etc.
- 2. If DBEs submitted quotes that were not used because the range of additional costs was determined to be excessive or unreasonable, submit the range that has been determined by the Bidder to be a reasonable range of additional costs and explain how that range was determined.
- 3. As a part of demonstrating a reasonable range of additional costs, submit copies of all subcontractor quotes, copies of spread sheet(s) which compare all DBE quotes with non-DBE quotes and which include bid item(s) quoted, work classifications, quantities, prices, and dollar amounts.
- 4. Submit a narrative of specific names and types of information, assistance, considerations given, and efforts to assist DBEs under Item IV, subparts C through F.

DBE BID ASSURANCE COMPLETE ONLY PART A. OR PART B.

PART A. RACE CONSCIOUS DBE PARTICIPATION SPECIFIC ASSIGNED CONTRACT DBE GOAL FOR BID EVALUATION PERCENT

If the DBE goal which is indicated in Section A,, CONTRACT GOAL, of APPENDIX A, BID CONDITIONS, DISADVANTAGED BUSINESS ENTERPRISE (DBE) is greater than 0.0 %, complete only Part A, and submit *DBE Commitment*, and if applicable, *Documentation of Good Faith Efforts*.

By signing the BID REPORT (either manually or electronically), it is understood that those individuals who sign as owners or authorized representatives of the Bidder, have read and are familiar with APPENDIX A, SPECIAL PROVISION, BID CONDITIONS, DISADVANTAGED BUSINESS ENTERPRISE and hereby certify that good faith efforts have been utilized to meet or exceed the goal of the DBE Program as established by the DBE Special Provision.

Indicat	re intended DBE commitment.
	We intend to meet or exceed the contract goals as per the DBE Commitment which is submitted with the Bid Proposal.
	RACE CONSCIOUS AND RACE NEUTRAL COMMITMENT PERCENT
	We fail to meet the advertised goal. This firm commits to DBE participation as per the DBE Commitment which is submitted with the EBS Bid Proposal and to continue Good Faith Efforts throughout the performance of the project. Documentation of Good Faith Efforts is submitted with the Bid Proposal, including: 1. DBE Contact Log Report

PART B. RACE NEUTRAL DBE PARTICIPATION ASSIGNED CONTRACT DBE GOAL FOR BID EVALUATION_____

2. Quote Comparison Report

PERCENT

If the DBE goal, which is indicated in Section A., CONTRACT GOAL, of APPENDIX A, BID CONDITIONS, DISADVANTAGED BUSINESS ENTERPRISE (DBE) is **0.0%**, complete only Part B and submit *Race Neutral DBE Information*.

By signing the BID REPORT (either manually or electronically), it is understood that those individuals who sign as owners or authorized representatives of the Bidder, have read and are familiar with APPENDIX A, SPECIAL PROVISION, BID CONDITIONS, DISADVANTAGED BUSINESS ENTERPRISE and hereby certify that equal opportunity action has been utilized to allow DBEs to compete for and perform on subcontracts.

We do not intend to sublet a portion of the	e contract work.
 	ct work. Our firm has taken equal opportunity perform on subcontracts. Documentation of Bid Proposal, including:
1. RACE NEUTRAL DB	E COMMITMENT PERCENT
2. DBE Contact Log Repo	ort
3. Quote Comparison Rep	port

VIII. ATTENTION CONTRACTORS

E.E.O. Affirmative Action Requirements on Federal and Federal-Aid Construction Contracts

Changes in Hometown Plan and Special Bid Conditions

All imposed Plans and the Philadelphia Plan approvals have been rescinded.

The use of Special Bid Conditions will discontinue.

New Requirements

Effective immediately all requests for bids/solicitations on all contracts and subcontracts of \$10,000 or more, will include the Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity, (Executive Order 11246), (Appendix A) and the Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246), (Appendix B). The provisions of FHPM 6-4-1-2 will continue to be used.

We recognize that there will be some duplicate material in the contracts as a result of incorporating the new OFCCP requirements. But we cannot discontinue use of Special Provision (Attachment 1 of FHPM 6-4-1-2) as it is regulatory material that requires an amendment by the Secretary of Transportation and publishing in the Federal Register. We have been informed by our Washington Office that FHPM 6-4-1-2 will be amended to eliminate any duplication in the contract provisions.

Appendix A, Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity, must include the goals for minority and female participation in each craft on all contracts and subcontracts.

As indicated in the final rulemaking published in the October 3, 1980, Federal Register by the Office of Federal Contract Compliance Programs, standards and goals for minority utilization, throughout the country, have now been implemented. Goals for minority representation in each trade are shown in Attachment A for the Contractor's use and guidance. (As previously indicated, the goals for female utilization will apply to all contracts and subcontracts irrespective of their geographical location.)

Paragraph 3, of Appendix A points out that the Contractor will provide written notification to OFCCP of award of any subcontract in excess of \$10,000. The Contractors must be advised that their notification will continue, as our regular reporting procedures, by making such notification to the Utah Department of Transportation that will then report it to the FHWA, that will then report to OFCCP.

APPENDIX A

Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246).

- 1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
- 2. The goals and timetables minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Timetables	Goals for minority participation for each trade	Goals for female participation in each trade
April 1, 1980 until March	31, 1981	6.9%
October 3, 1980	6.0 %	

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or Federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. See Attachment A. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federal involved construction.

The Contractor's compliance with the Executive Order and the regulations is 41 CFR part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and their efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of their projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the Contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3.	The Contractor shall provide written notification to the Director of the Office of Federal
	Contract Compliance Programs within 10 working days of award of any construction
	subcontract in excess of \$10,000 at any tier for construction work under the contract
	resulting from this solicitation. The notification shall list the name, address and telephone
	number of the subcontractor; employer identification number of the subcontractor;
	estimated dollar amount of the subcontract; estimated starting and completion dates of the
	subcontract; and the geographical area in which the subcontract is to be performed.

4.	As used in this Notice, and in the	contract resulting	from this solici	tation, the "covered
	area" is, State of Utah, County of	Weber		

APPENDIX B

Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)

- 1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted:
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United State Department of Labor, or any person to whom the Director delegates authority;
 - c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 - d. "Minority" includes:
 - (i) Black (all persons having origins in any of the black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
- 2. Whenever the Contractor, or any at any tier, subcontracts a portion of the work involving any construction trade, they shall physically include in each subcontract in excess of \$10,000 the provision of these specifications and the Notice that contains the applicable goals for minority and female participation and that is set forth in the solicitations from which this contract resulted.
- 3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, their affirmative action obligations on all work in the plan area (including goals and timetables) shall be in accordance with that Plan for those trades that have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor participating in an approved Plan is individually required to comply with its obligations under the E.E.O. clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's failure to take good faith efforts to achieve the Plan goals and timetables.

- 4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonable be able to achieve in each construction trade in which they have employees in the covered area. Covered Construction Contractors performing construction work in geographical areas where they do not have a federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the federal register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting their goals in each craft during the period specified.
- 5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
- 6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities, Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
- 7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon their effort to achieve maximum results from their actions, The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work, The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or their union have employment opportunities available, and maintain a record of the organization's responses.

- c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have take.
- d. Provide immediate written notification to the Director when the union with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- e. Develop on-the-job training opportunities and/or participate in training programs for the area that expressly includes minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
- f. Disseminate the Contractor's E.E.O. policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting their E.E.O. obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc. by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company E.E.O. policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the company's E.E.O. policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's E.E.O. policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of

applications for apprenticeship or other training by ANY recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc. such opportunities.
- m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the E.E.O. policy and the Contractor's obligations under these specifications are being carried out.
- n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
- o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractors and suppliers, including circulation of solicitations to minority and female Contractor associations and other business associations.
- p. Conduct a review, at least annually of all supervisors' adherence to and performance under the Contractor's E.E.O. policies and affirmative action obligation.
- 8. Contractors are encouraged to participate in voluntary associations that assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a Contractor association, joint Contractor-union, Contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group, has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goal and timetables, and can provide access to documentation that demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

- 9. A single goal for minorities and a separate single goal for women has been established, The Contractor, however is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority, Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved their goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
- 10. The Contractor shall not use the goals and timetables or affirmative actions standards to discriminate against any person because of race, color, religion, sex, or national origin.
- 11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
- 12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
- 13. The Contractor in fulfilling their obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from their efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
- 14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company E.E.O. policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee, the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer,) dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed, Records shall be maintained in an easily understandable and retrievable form, however, to the degree that existing records satisfy this requirement, Contractors shall not be required to maintain separate records.
- 15. Nothing herein provided shall be construed as a limitation upon the application of other laws that establish different standards of compliance or upon application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

GOALS FOR MINORITY PARTICIPATION FOR EACH TRADE

County	Percentage
Beaver	12.6
Box Elder	5.1
Cache	5.1
Carbon	5.1
Daggett	5.1
Davis	6.0
Duchesne	5.1
Emery	5.1
Garfield	12.6
Grand	10.2
Iron	12.6
Juab	5.1
Kane	12.6
Millard	5.1
Morgan	5.1
Piute	5.1
Rich	5.1
Salt Lake	6.0
San Juan	10.2
Sanpete	5.1
Sevier	5.1
Summit	5.1
Tooele	6.0
Uintah	5.1
Utah	2.4
Wasatch	5.1
Washington	12.6
Wayne	
Weber	

IX. Specific Equal Employment Opportunity Responsibilities

1. General

- a. Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal employment opportunity as required by Executive Order 11246 and Executive Order 11375 are set forth in Required Contract Provisions (Form PR-1273 or 1316, as appropriate) and these Special Provisions that are imposed pursuant to Section 140 of Title 23, U.S.C. as established by Section 22 of the Federal Highway Act of 1968. The requirements set forth in these Special provisions shall constitute the specific affirmative action requirements for project activities under this contract and supplement the equal employment opportunity requirements set forth in the Required Contract Provisions.
- b. Contractors will work with the State highway agencies and the Federal Government in carrying out equal employment opportunity obligations and in their review of contractor activities under the contract.
- c. Contractors and all their Subcontractors holding subcontracts not including material suppliers, of \$10,000 or more, will comply with the following minimum specific requirement activities of equal employment opportunity: (The equal employment opportunity requirements of Executive Order 11246, as set forth in Volume 6, Chapter 4, Section 1, Subsection 1 of the Federal-Aid Highway program Manual, are applicable to material suppliers as well as Contractors and Subcontractors.) The Contractor will include these requirements in every subcontract of \$10,000 or more with such modification of language as is necessary to make them binding on the Subcontractor.

2. Equal Employment Opportunity Policy

Contractors will accept as operating policy the following statement that is designed to further the provision of equal employment opportunity to all persons without regard to their race, color, religion, sex, or national origin, and to promote the full realization of equal employment opportunity through a positive continuing program:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, or national origin. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, apprenticeship, and/or on-the-job training."

3. Equal Employment Opportunity Officer

Contractors will designate and make known to the State highway agency contracting officers an equal employment opportunity officer (hereinafter referred to as the E.E.O. Officer) who will have the responsibility for and must be capable of effectively administering and promoting an active Contractor program of equal employment opportunity and who must be assigned adequate authority and responsibility to do so.

4. Dissemination of Policy

- a. All members of the Contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the Contractor's equal employment opportunity policy and contractual responsibilities to provide equal employment opportunity in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:
 - (1) Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the Contractor's equal employment opportunity policy and its implementation will be reviewed and explained. The meetings will be conducted by the E.E.O. Officer or other knowledgeable company official.
 - (2) All new supervisory or personnel office employees will be given a thorough indoctrination by the E.E.O. Officer or other knowledgeable company official covering all major aspects of the Contractor's equal employment opportunity obligations within thirty days following their reporting for duty with the Contractor.
 - (3) All personnel who are engaged in direct recruitment for the project will be instructed by the E.E.O. Officer or appropriate company official in the Contractor's procedures for locating and hiring minority group employees.
- b. In order to make the Contractor's equal employment opportunity policy known to all employees, prospective employees, and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the Contractor will take the following actions:
 - (1) Notices and posters setting forth the Contractor's equal employment opportunity policy will be placed in areas readily accessible to employees, applicants for employment, and potential employees.

(2) The Contractor's equal employment opportunity policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

5. Recruitment

- a. When advertising for employees, the Contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be published in newspapers or other publications having a large circulation among minority groups in the area from which the project work force would normally be derived.
- b. The Contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants, including, but not limited to, State employment agencies, schools, colleges, and minority group organizations. To meet this requirement, the Contractor will, through his E.E.O. Officer, identify sources of potential minority group employees, and establish with such identified sources of procedures whereby minority group applicants may be referred to the Contractor for employment consideration.

In the event the Contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, they are expected to observe the provisions of that agreement to the extent that the system permits the Contractor's compliance with equal employment opportunity contract provisions, (The U.S. Department of Labor has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the Contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. Contractors will encourage their present employees to refer minority group applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures with regard to referring minority group applicants will be discussed with employees.

6. Personnel Actions

Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, or national origin, The following procedures shall be followed:

a. Contractors will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

- b. Contractors will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
- c. Contractors will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the Contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
- d. Contractors will promptly investigate all complaints of alleged discrimination made to them in connection with their obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the Contractor will inform every complainant of all avenues of appeal.

7. Training and Promotion

- a. Contractors will assist in locating, qualifying, and increasing the skill of minority group and women employees, and applicants for employment.
- b. Consistent with the Contractor's work force requirements and as permissible under Federal and State regulations, the Contractor shall make full use of training programs i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event the training Special provision is provided under this contract, this subparagraph will be superseded as indicated in Attachment 2.
- c. Contractors will advise employees and applicants for employment of available training programs and entrance requirements for each.
- d. Contractors will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

8. Unions

If Contractors rely in whole or in part upon unions as a source of employees, Contractors will use their best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by Contractors either directly or through a Contractor's association acting as agent will include the procedures set forth below:

- a. Contractors will use their best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.
- b. Contractors will use their best efforts to incorporate an equal employment opportunity clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, or national origin.
- c. Contractors are to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the Contractor, the Contractor shall so certify to the State Highway Department and shall set forth what efforts have been made to obtain such information.
- d. In the event the union is unable to provide the Contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the Contractor will through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, or national origin, making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The U.S. Department of Labor has held that it shall be no excuse that the union with which the Contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the Contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such Contractor shall immediately notify the State highway agency.

9. Subcontracting

- a. Contractors will use their best efforts to solicit bids from and to utilize minority group Subcontractors or Subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of minority-owned construction firms from State highway agency personnel.
- b. Contractors will use their best efforts to ensure Subcontractor compliance with their equal employment opportunity obligations.

10. Records and Reports

- a. Contractors will keep such records as are necessary to determine compliance with the Contractor's equal employment opportunity obligations. The records kept by the Contractor will be designed to indicate:
 - (1) the number of minority and non-minority group members and women employed in each work classification on the project,
 - (2) the progress and efforts being made in cooperation with unions to increase employment opportunities for minority and women (applicable only to Contractors who rely in whole or in part on unions as a source of their work force),
 - (3) the progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees, and
 - (4) the progress and efforts being made in securing the services of minority group Subcontractors or Subcontractors with meaningful minority and female representation among their employees.
- b. All such records must be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the State highway agency and the Federal Highway Administration.
- c. Contractors will submit to the State highway agency a monthly E.E.O. report for each month for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form PR-1391. Each covered Subcontractor will submit the reports for the life of the Subcontractor's agreement and indicate last month of work. When no work is performed during a month indicate this on the report as NO WORK.

Training Special Provisions

This Training Special Provisions supersedes subparagraph 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities," (Attachment 1), and is in implementation of 23 U.S.C.C.140(a).

As part of the Contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The Contractor shall provide on-the-job training aimed at developing full journeymen in the type of trade or job classification involved.

The number of trainees to be trained under the special provision will be _____ (amount to be filled in by the State Highway Department).

In the event that a Contractor subcontracts a portion of the contract work, they shall determine how many, if any, of the trainees are to be trained by the Subcontractor, provided, however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision, The Contractor shall also ensure that this training special provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the Contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment. Prior to commencing construction, the Contractor shall submit to the State highway agency for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. The Contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the Contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private likely to yield minority and women trainees) to the extent that such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps that they have taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journeyman status or in which they have been employed as a journeyman. The Contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the Contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the Contractor and approved by the State highway agency and the Federal Highway Administration. The State highway agency and the Federal Highway Administration shall approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved but not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the division office. Some off-site training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the Contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the engineer, reimbursement will be made for training persons in excess of the number specified herein. This reimbursement will be made even though the Contractor receives additional training program funds from other sources provided such other source does not specifically prohibit the Contractor from receiving other reimbursement. Reimbursement for off-site training indicated above may only be made to the Contractor where they do one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee, or pays the trainee's wages during the off-site training period.

No payment shall be made to the Contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the Contractor and evidences a lack of good faith on the part of the Contractor in meeting the requirements of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program. It is not required that all trainees be on board for the entire length of the contract. Contractors will have fulfilled their responsibilities under this Training Special Provision if they have provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

Contractors shall furnish the trainee a copy of the program the Contractor will follow in providing the training. The Contractor shall provide each trainee with a certification showing the type and length of training satisfactorily completed.

The Contractor will provide for the maintenance of records and furnish periodic reports documenting their performance under this Training Special Provision.

X. REQUIRED CONTRACT PROVISIONS

FEDERAL-AID CONSTRUCTION CONTRACTS

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ATTACHMENTS

A. Employment Preference for Appalachian Contracts (included in Appalachian contracts only)

I. GENERAL

- 1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.
- 2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.
- 3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.
- 4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

Section I, paragraph 2; Section IV, paragraphs 1, 2, 3, 4, and 7; Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

- 6. **Selection of Labor:** During the performance of this contract, the contractor shall not:
- a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or
- b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

- 1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:
- a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.
- b. The contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training."

- 2. **EEO Officer:** The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.
- 3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and

will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

- a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
- b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.
- c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.
- d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
- e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.
- 4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.
- a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.
- b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended)
- c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.
- 5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

- a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
- b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
- c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
- d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. Training and Promotion:

- a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.
- b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.
- d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.
- 7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:
- a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.
- b The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

- c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information
- d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.
- 8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.
- a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.
- b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.
- c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.
- 9. **Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.
- a. The records kept by the contractor shall document the following:
- (1) The number of minority and non-minority group members and women employed in each work classification on the project;
- (2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;
- (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and
- (4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

- a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.
- b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).
- c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL

poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

- b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.
- c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

- a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.
- b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:
- (1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;
- (2) the additional classification is utilized in the area by the construction industry;
- (3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and
- (4) with respect to helpers, when such a classification prevails in the area in which the work is performed.
- c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the

contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

- a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.
- b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

$4.\;\;$ Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

- (1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.
- (2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level

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hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

- (3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.
- (4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

- (1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.
- (2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.
- (3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.
- (4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable

wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. Apprentices and Trainees (Programs of the U.S. DOT):

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3):

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

- a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.
- b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.
- c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this

- Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.
- d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;
- (2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;
- (3) that each laborer or mechanic has been paid not less that the applicable wage rate and fringe benefits or cash equivalent for the classification of worked performed, as specified in the applicable wage determination incorporated into the contract.
- e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.
- f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.
- g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

- 1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:
- a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

- b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.
- c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.
- 2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

- 1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).
- a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.
- b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.
- 2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.
- 3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.
- 4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment

and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

- 2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).
- 3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented; Shall be fined not more that \$10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

- 1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.
- 2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.
- 3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.
- 4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

$1. \ \ \, \textbf{Instructions} \ \ \, \textbf{for} \ \ \, \textbf{Certification} \ \ \, \textbf{-} \ \, \textbf{Primary} \ \ \, \textbf{Covered}$ Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant

knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

- d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.
- f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
- g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
- h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.
- i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

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- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and
- d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- 2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

2. Instructions for Certification - Lower Tier Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
- h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions:

- 1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

- 1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:
- a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

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- b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- 2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or
- entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.
- 3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

XI. Wage Rates Applicable

IERAL DECISION UT020023 04/11/03 UT23 eneral Decision Number UT020023

Superseded General Decision No. UT010023

State: Utah

Construction Type:

HIGHWAY

County(ies):

DAVIS WEBER

HIGHWAY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	03/01/2002
1	05/17/2002
2	12/27/2002
3	01/17/2003
4	03/14/2003
5	04/11/2003

* ELEC0354C 12/01/2002

* ELECUSS4C 12/01/2002		
ELECTRICIANS	Rates 23.96	Fringes 6.34+4.2%
ENGI0003Y 07/01/2002		
ENGIOUSI 0770172002	Rates	Fringes
POWER EQUIPMENT OPERATORS:	races	11111900
Blade smooth/finish	21.42	9.73
Tractor, small rubber tire with attachments	19.42	9.73
IRON0027E 07/01/2002		
INON0027E 0770172002	Rates	Fringes
IRONWORKERS, Reinforcing	20.76	8.62
SUUT3005A 03/25/1992	D .	- ·
CARPENTERS	Rates 16.13	Fringes 2.80
CEMENT MASONS		2.41
FLAGGERS	6.59	1.75
IRONWORKERS:	3. 3	1.70
Ornamental & Structural	16.65	3.65
LABORERS:		
General Laborer, Asphalt Raker,		

Landscape Laborer	10.04	2.53
Concrete Laborer (Compaction,		
Underground Fine Grading,		
Operation of Shute or Bucket)	10.04	2.53
Grade Laborer (Uses hand held		
level to check grade, inserts		
grade stakes in concrete)	10.04	2.53
Pipelayer (Smooths sides and bottom		
of trenches, does rigging of pipe,		
assembles and installs concrete and		
tile pipe)	11.03	3.54
Laborer, Power Tools (Cutting Torch,		
Operators of Gasoline, Electric		
or Pneumatic Tools, e.g. compressor,	7	
compactor, jackhammer, vibrator,		
concrete saw, chain saw, and		
concrete cutting torch)	12.65	2.79
Fence Erection Laborer (clearing		
of right of way, unloading of		
materials by hand, digging of post		
holes & pouring of concrete in	10.04	0 50
connection therewithin)	10.04	2.53
PAINTERS, SPRAY	14.05	1.62
POWER EQUIPMENT OPERATORS:	1 4 1 4	F 60
Asphalt Finishing Machine	14.14	5.69
Asphalt Plant Operator	18.05	7.23
Backhoe, Tire & Track, under	10 44	4 57
5 cu. yds.	13.44	4.57
Backhoe, Tire & Track, over	14 05	7 00
5 cu. yds.	14.05	7.23
Blade, Rough	11.60 18.05	2.22
Bulldozer, All Sizes Chip Spreader	16.29	7.08 7.08
	12.53	2.22
Laydown Machine, Asphalt/Concrete Loader, All Sizes	18.05	5.09
Paver, Asphalt	12.53	2.22
Roller, Asphalt	12.80	4.12
Roller, Grade/Compaction	11.01	3.31
Screedman	10.95	3.09
TRUCK DRIVERS:	10.93	3.03
Dump Trucks - Water Level Capacity		
(Bottom, End and Side), Including		
Dumpster Truck, Turnawagons,		
Turnarockers and Dumpcrete):		
Less than 8 cu. yds.	10.50	
8 cu. yds. and less than 14		
cu. yds.	9.80	2.22
14 cu. yds. and less than 35		
cu. yds.	16.14	4.87
Water, Fuel and Oil Trucks:		
Up to 2500 gallons	9.95	2.22
2500 gallons to less than 4000		

gallons	11.67	3.31	
Oil Spreader Operator where Boot			
Man is not required	9.25		
Transport Truck	10.90	1.42	

TEAM0222D 07/01/2000

	Rates	F'rınges
TRANSIT MIX TRUCKS:		
0 cu. yds. to 8 cu. yds.	16.615	8.69
8 1/4 cu. yds. to 14 cu. yds.	16.715	8.69

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively

bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

- 1.) Has there been an initial decision in the matter? This can be:
- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator U.S. Department of Labor 200 Constitution Avenue, N. W. Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board U. S. Department of Labor 200 Constitution Avenue, N. W. Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final. END OF GENERAL DECISION

XII. Bidding Schedule

Utah Department of Transportation Bidder's Schedule

Bid Opening Date: 7/22/2003Region: REGION 1Project Number: HPP-3462(1)3County WEBER

Project Name: NORTH OGDEN DIVIDE ROAD

Description: SAFETY IMPROVEMENTS

Funding FEDERAL

Item Description Quantity Unit

1	00830001U	Equal Opportunity Training	1000	hour
2	012850010	Mobilization	1	lump sum
3	01554000*	Traffic Control	1	lump sum
ļ	01721001*	Survey	1	lump sum
5	02056005P	Borrow	7429	cubic yard
6	020750030	Geotextiles - Drainage	221	square yard
7	022210075	Remove Guardrail	2256	foot
3	02224004P	Remove Asphalt Pavement	6476	square yard
9	022310020	Clearing and Grubbing	6	acre
10	02316002P	Roadway Excavation (Plan Quantity)	61110	cubic yard
1	023180020	Surface Ditch	300	foot
12	02319000*	Rock Blasting	2160	cubic yard
3	023730010	Loose Riprap	89	cubic yard
4	026100048	24 inch Corrugated Steel Pipe Culvert, Class A	47	foot
15	026100052	36 inch Corrugated Steel Pipe Culvert, Class A	170	foot
16	026100056	48 inch Corrugated Steel Pipe Culvert, Class A	239	foot
7	02612000*	Pipe Anchor Assembly	15	each
8	026130040	Culvert End Section 24 inch	1	each
9	026130060	Culvert End Section 36 inch	1	each
20	026130080	Culvert End Section 48 inch	2	each
21	02615000*	Wall Drainage Assembly	7	each
22	026350030	Manhole Frame and Solid Cover, Std Dwg GF 2	3	each
23	026350050	Manhole Steps, Std Dwg GF 6	17	each
24	027210060	Untreated Base Course 3/4 inch Max	2495	cubic yard
25	027410060	HMA - 3/4 inch	1611	-
26	02748001P	Liquid Asphalt MC-70 or MC-250	6	ton
27	027480050	Emulsified Asphalt SS-1H	3	ton
28	02771004*	Concrete Ditch	2124	foot
29	02821000*	Remove, Store and Reinstall Chain Link Fence	267	foot
30	028410010	Beam Guardrail	2700	foot
31	02841004*	Reset Concrete Barrier	686	foot
32	028410040	Precast Concrete Barrier	119	foot
33	028430010	Crash Cushion Type B	2	each
34	028910005	Remove Sign	5	each
35	02912003*	Strip and Stockpile Topsoil	2461	cubic yard
86	02912004*	Spread Stockpiled Topsoil		square yard
37	032110010	Reinforcing Steel - Coated		pound
38	033100020	Concrete- Small Structure		cubic yard

20 - STRUCTURES

39	02061002P	Free Draining Granular Backfill Borrow	10 cubic yard
40	02861000*	Post and Panel Retaining Wall	19887 square foot

^{*}Note: Item numbers ending with "*" or "P" identify a change to the Standard Specification, Supplemental Specifications or Measurement and payment. Read all related documents carefully.

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Utah Department of Transportation Bidder's Schedule

Bid Opening Date: 7/22/2003Region: REGION 1Project Number: HPP-3462(1)3County WEBER

Project Name: NORTH OGDEN DIVIDE ROAD **Description:** SAFETY IMPROVEMENTS

Funding FEDERAL

#	Item	Description	Quantity	Unit
20 - S	TRUCTURES			
41	032110010	Reinforcing Steel - Coated	280	pound
42	033100010	Structural Concrete		lump sum
30 - L	ANDSCAPING			
43	01571002P	Stone Check Dam	36	each
44	01571003*	Brush Barrier	781	foot
45	015710040	Slope Drain	164	foot
46	015710050	Drop-Inlet Barriers (Straw or Hay Bale)	40	foot
47	01571008P	Sediment Trap	105	cubic foot
48	015710090	Temporary Berm	122	foot
49	015740010	Environmental Control Supervisor	1	lump sum
50	02373001P	Vegetated Riprap Swale	353	foot
51	02909000*	Channel Substrate	1325	cubic yard
52	02911001P	Wood Fiber Mulch	9	acre
53	02911002*	Shredded Bark Mulch	6	cubic yard
54	029110020	Straw Mulch	1	acre
55	02913000*	Invasive Weed Control	1	lump sum
56	02922031*	Broadcast Seed Mix 1	6	acre
57	02932030P	Acer glabrum (Rocky Mountain Maple) - No. 1 Container	87	each
58	02932031P	Acer grandidenttum (Big-tooth Maple) - No. 1 Container	75	each
59	02932032P	Amelanchier utahensis (Utah Serviceberry) - No. 1 Container	23	each
60	02932034P	Cornus Sericea (Redosier dogwood) - No. 1 Container	55	each
61	02932036P	Prunus virginiana (Chokecherry) - No. 1 Container	45	each
62	02932037P	Quercus gambelii (Gambel Oak) - No. 1 Container	121	each
63	02932038P	Sambucus caerulea (Blue Elderberry) - No. 1 Container	12	each
64	02932039P	Cercocarpus ledifolius (Curleaf Mountain Mahagony) - No. 1 Container	36	each
65	029360010	Establishment Period	1	lump sum
40 - S	IGNING			
66	02765005*	Pavement Marking Paint	36	gallon
67	02891001P	Sign Type P-1 18 in X 18 in	30	each
68	028910105	Sign Type A-2, 24 inch X 30 inch	4	each
69	028910225	Sign Type P-2, 30 inch X 30 inch	31	each

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^{*}Note: Item numbers ending with "*" or "P" identify a change to the Standard Specification, Supplemental Specifications or Measurement and payment. Read all related documents carefully.

XIII. Measurement and Payment

Except as noted, the Department will measure and pay for each bid item as detailed in this section.

Payment is contingent upon acceptance by the Department.

Items are listed by Specification and in tables as follows:

Item #	Bid item number	Bid Item Name	Unit of measurement and payment
Additional information goes here.			

1	00830001U	Equal Opportunity Training	Hour

2 012850010 Mobilization Payment Amount Paid		Mobilization	Lump sum
		Amount Paid	When Paid
	First	The lesser of 25% of mobilization or 2.5% of contract	With first estimate
	Second	The lesser of 25% of mobilization or 2.5% of contract	With estimate following completion of 5% of contract
	Third	The lesser of 25% of mobilization or 2.5% of contract	With estimate following completion of 10% of contract
	Fourth	The lesser of 25% of mobilization or 2.5% of contract	With estimate following completion of 20% of contract
	Final	Amount bid in excess of 10% of contract price.	Project Acceptance - Final

3	01554000*	Traffic Control	Lump sum
	Includes all traffic control signs, barricades, etc. to complete the project		
Payment Amount Paid V		When Paid	
	One	25% of bid item amount	With first estimate
		Remaining portion of bid item paid as a percentage of the contract completed	With each estimate

4	01721001*	Survey	Lump sum	
	Contractor to perform all survey, including layout, staking, quantity measu survey, and survey calculations.			
	Payment Amount Paid When Paid		When Paid	
	First	25% of the bid item amount	When the project is 5% complete	
	Second	A total of 40% of bid item amount	When the project is 10% complete	
	Third	A total of 75% of bid item amount	When the project is 50% complete	
	Fourth	A total or 90% of bid item amount	When the project is 75% complete	
	Fifth	The Department retains the remaining 10% of bid item amount until the projected completion and all surveying and design data "as staked/constructed" drawings in Microstation format clearly showing all final dimensions, lines, grades, tie-ins, and elevations from contract plans are returned to the Engineer.		

5	02056005P	Borrow	Cubic yard		
	Measured by Contractor. Based on average end area measured in place. Refer to Section 01280 "Measurement."				

6	020750030	Geotextiles - Drainage	Square yard	
In place, DEPARTMENT will not pay for overlaps.				

7	022210075	Remove Guardrail	Feet	
Includ	Including end sections and anchorages.			

	8	02222004*	Remove Asphalt Pavement	Square yard
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Regardless of the depth or number of courses encountered.

- A. Do not measure discontinued roads within the limits of the new roadbed or roads that are disturbed in performing other items of work.
- B. Department will pay for material placed to cover pavements or fill depressions under "Roadway Excavation," or "Borrow."
- C. Department will pay for concrete curb and concrete curb and gutter integral to the concrete pavement to be removed under "Remove Concrete Pavement."
- D. Quantity measured and paid is excluded from measurement and payment under "Roadway Excavation".
- E. Includes all asphalt pavement sawing for project.

9	02231002	0 Clearing and Grubbing	Acre
 A. Measurement: Measured to the nearest 500 yd². Calculated by width (slope stake) X length (station to station) along each alignment as show Report. 1. Independent alignments will be considered separate lengths, we exclusions. 		` 1	
		s, with no	
		uliteration of roads, areas designated to remain such as cull not be included	ultivated fields, etc.,

B. Payment:

- 1. Any overlapping areas will be paid for only once.
- 2. Additional areas for payment outside the roadbed will be specified or designated by the Engineer.
- 3. Materials used for filling depressions will be measured and paid for separately as "Roadway Excavation" or "Borrow." If "Roadway Excavation" or "Borrow" is not included in the proposal, it will be considered incidental to the work.

10	02316002P	Roadway Excavation (Plan Quantity)	Cubic yard
A.	In original po	sition, computed by the method of average end are	eas
B.	Department will authorize cross sections or modifications including excavation below subgrade, unstable slopes, unpreventable slides and terracing.		
C.	Department will not pay for excavation in excess of that authorized.		
D.	The Departme "Extra Work."	ent pays for re-handing or additional haul when it	s directed in writing as
E.	Includes 2 Settlement plates for Horseshoe fill.		
F.	Includes slope	e rounding and slope benching as shown in the pla	ns.

11	023180020	Surface Ditch	Feet
A. B.	DEPARTME	ng the ditch center line, in place. NT will pay for "Surface Ditch" as "Roadway Excava not contain a pay item for "Surface Ditch."	ntion" when the

12	02319000*	Rock Blasting	Cubic Yard
	red by Contractor shown on the pla	includes drilling, explosives, labor, etc. to shape ins.	cock to the lines and

13	023730010	Loose Riprap	Cubic Yard	
In place	In place, computed using the in-place surface area and specified thickness.			

14	026100048	24 inch Corrugated Steel Pipe Culvert, Class A	Feet
Measured parallel to the center line from barrel end to barrel end, in place.			

15	026100052	36 inch Corrugated Steel Pipe Culvert, Class A	Feet	
Measur	Measured parallel to the center line from barrel end to barrel end, in place.			

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16	026100056	48 inch Corrugated Steel Pipe Culvert, Class A	Feet
Measur	red parallel to	the center line from barrel end to barrel end, in place.	

17	02612000*	Pipe Anchor Assembly	Each
Include	es all materials and	d labor to construct each pipe anchor assembly in	place.

18	026130040	Culvert End Sections 24 inch	Each
In Place			

19	026130060	Culvert End Sections 36 inch	Each
In Place			

20	026130080	Culvert End Sections 48 inch	Each
In Place			

21	02615000*	Wall Drainage Assembly	Each

Includes catch basin, frame and grate, pipe, elbows, connections and labor for each complete drain assembly in place.

22	026350030	Manhole Frame and Solid Cover, Std Dwg GF 2	Each
In Place			

23	026350050	Manhole Steps, Std Dwg GF 6	Each
In Place	e		

24	027210060	Untreated Base Course 3/4 inch Max	Cubic Yard
Compu	Computed by average end area of plan typical sections		

25	027410060	HMA - 3/4 inch	Ton
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Includes aggregates, asphalt binder, hydrated lime, other additives, etc. The Department will not pay separately for asphalt binder, hydrated lime, additives, etc.

26 027480010 Liquid Asphalt MC-70 or MC-250	Ton
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27	027480050	Emulsified Asphalt SS-1H	Ton	
Do no	Do not measure water in excess of the specified amount in Standard Specification 02745.			

28	02771004*	Concrete Ditch	Feet
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In Place

Price Adjustments for Strength

- A. When concrete is below specified strength:
 - 1. Department may accept item at a reduced price
 - 2. The pay factor will be applied to the portion of the item which is represented by the strength tests that fall below specified strength.
 - 3. Department will calculate the pay factor as follows:

Psi below specified streng	gth: Pay Factor:
1 - 100	0.98
101 - 200	0.94
201 - 300	0.88
301 - 400	0.80
More than 400	0.50 or Engineer may reject

29	02821000*	Remove, Store and Reinstall Chain Link Fence	Feet
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Includes replacement posts, fence and parts damaged during removal and storage. Includes new posts, fence and parts needed to complete reinstallation. Existing gates are not measured separately, but are included in the "per foot" measurement. Measurement is made on the final, in place position.

30	028410010	Beam Guardrail	Feet
In Place			

31	028410040	Precast Concrete Barrier	Feet
In Place			

32	02841004*	Reset Concrete Barrier	Feet
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Includes removing, storage, resetting, connecting, transportation, and labor for setting concrete barrier sections in place at the new locations called for in the plans. Includes new barrier seals and connection pins.

33	028430010	Crash Cushion Type B	Each
In Place	2		

34	028910005	Remove Sign	Each
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35	02912003*	Strip and Stockpile Topsoil	Cubic Yard
Measure	ed by Contractor	in stockpile.	

	36	02912004*	Spread Stockpiled Topsoil	Square Yard
Ī	In Place			

37	032110010	Reinforcing Steel - Coated	Pound
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Measurement: Per Plan Quantity

- 1. Do not include the mass of the coating or the specified test bars as computed weight
- 2. DEPARTMENT will not make allowances for extra reinforcing steel required to provide lap splices that are requested by the contractor.
- 3. DEPARTMENT will not make allowances for clips, chairs, wire, or other materials used for fastening reinforcement in place.

38	033100020	Concrete - Small Structure	Cubic Yard
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Measurement:

- A. When the contract provides measurement per cubic yard, measure quantities by the dimensions shown.
- B. Use the prismoidal formula when the method of average end areas is not sufficiently accurate.
- C. Do not measure concrete required to fill over breakage of excavation for footings, walls, or slabs
- D. Department will not deduct for volume occupied by pipes (other than culverts), reinforcing steel, piles, metal grillage, anchors, conduits, or weep holes.

Payment:

- A. Department will pay for reinforcing steel for structures separately, unless otherwise noted.
- B. Department will pay separately for concrete placed in individual structures containing less than 8 yd³ at the bid price per cubic yard for Concrete, Small Structure.
- C. Department will make no separate payment for excavation for structures.

39	02061002P	Free Draining Granular Backfill Borrow	Cubic Yard
Measured by Contractor		Computed by average end area of plan typical section	18.

40	02861000*	Post and Panel Retaining Wall	Sq Ft
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Includes boring in rock for post foundation placement. Includes Filter Fabric, Composite Drainage Material and Free Draining Granular Backfill Borrow for Post and Panel Retaining Wall construction in place.

41	032110010	Reinforcing Steel - Coated	Pound
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Measurement Per Plan Quantity:

- 1. Do not include the mass of the coating or the specified test bars as computed weight
- 2. DEPARTMENT will not make allowances for extra reinforcing steel required to provide lap splices that are requested by the contractor.
- 3. DEPARTMENT will not make allowances for clips, chairs, wire, or other materials used for fastening reinforcement in place.

42	033100010	Structural Concrete (Est. Qty 4.2yd ³)	Lump
----	-----------	--	------

Measurement:

- A. When the contract provides a lump sum bid, the quantities shown on the plans are estimated quantities only, and are not to be used as exact quantities.
- B. When the contract provides measurement per cubic yard, measure quantities by the dimensions shown.
- C. Use the prismoidal formula when the method of average end areas is not sufficiently accurate.
- D. Do not measure concrete required to fill over breakage of excavation for footings, walls, or slabs.
- E. DEPARTMENT will not deduct for volume occupied by pipes (other than culverts), reinforcing steel, piles, metal grillage, anchors, conduits, or weep holes.

Payment:

- A. DEPARTMENT will pay for reinforcing steel for structures separately, unless otherwise noted.
- B. DEPARTMENT will pay separately for concrete placed in individual structures containing less than 8.5yd³ at the bid price per cubic yard for Concrete, Small Structure.
- C. DEPARTMENT will make no separate payment for excavation for structures.
- D. DEPARTMENT will adjust prices as follows when the Contract provides for concrete structures as a lump sum:
 - 1. If the ENGINEER increases or decreases the quantity of concrete.
 - Unit price will be determined by dividing the contract lump sum price of that item by the estimated quantity of concrete as shown on the plans.
 - The contract lump sum price will be adjusted by an amount equal to the product of the change in quantity and computed unit price.
 - 2. If the estimated quantity of concrete as shown is in error by more than 10 percent:
 - The contract lump sum price will be increased or decreased by an amount equal to the product of the unit price determined in accordance with the previous line of this paragraph and the difference between the corrected quantity and the estimated quantity.
- E. Concrete Slope Protection: If preparation of the existing subgrade requires excavation or backfilling in excess of the 3.5 in average depth beyond the slope at bid time, DEPARTMENT will pay per Section 01282.

43	01571002P	Stone Check Dam	Each
In Place			

44	01571003*	Brush Barrier	Feet
In Place	2		

45	015710040	Slope Drain	Feet
In Place	9		

46	015710050	Drop-inlet Barriers (Straw or Hay Bale)	Feet
In place along the center line of bales.			

47	01571008P	Sediment Trap	Cubic Feet	
Measur	Measured by Contractor of material excavated.			

48	015710090	Temporary Berm	Feet	
In place	In place along the center line of the berm.			

49	015740010	Environmental Control Supervisor	Lump Sum
Payment Amount Paid		Amount Paid	When Paid
	One	25% of the bid item amount	With first estimate
		Remaining portion of bid item paid as a percentage of the contract completed	With each estimate

50	02373001P	Vegetated Riprap Swale	Feet
In Place			

51	02909000*	Channel Substrate	Cubic Yard		
Measur	Measured by Contractor. In Place				

52	02911001P	Wood Fiber Mulch	Acre
Include	Includes tackifier		

53	02911002*	Shredded Bark Mulch	Cubic Yard
In Place			

54	029110020	Straw Mulch	Acre			
If the m	If the moisture content in straw mulch exceeds 18 percent, apply additional straw to					
compen	sate for the differ	ence				

55	02913000*	Invasive Weed Control	Lump Sum	
56	02922031*	Broadcast Seed Mix 1	Acre	
In Place				

57	02932030P	Acer glabrum (Rocky Mountain Maple) - No. 1 Container	Each		
In Place for.	In Place. Missing or unacceptable plant material at the final plant inspection will not be paid for.				

58	02932031P	Acer grandidenttum (Big-tooth Maple) - No. 1 Container	Each		
In Place for.	In Place. Missing or unacceptable plant material at the final plant inspection will not be paid for.				

59	02932032P	Amelanchier utahensis (Utah Serviceberry) - No. 1 Container	Each	
In Place. Missing or unacceptable plant material at the final plant inspection will not be paid for.				

60	02932034P	Cornus Sericea (Redosier Dogwood) - No. 1 Container	Each	
In Place. Missing or unacceptable plant material at the final plant inspection will not be paid for				

61	02932036P	Prunus virginiana (Chokecherry) - No. 1 Container	Each	
In Place. Missing or unacceptable plant material at the final plant inspection will not be paid for				

62	02932037P	Quercus gambelii (Gambel Oak) - No. 1 Container	Each
In Place for.	e. Missing or u	nacceptable plant material at the final plant inspection w	ill not be paid

63	02932038P	Sambucus caerulea (Blue Elderberry) - No. 1 Container	Each		
In Place	In Place. Missing or unacceptable plant material at the final plant inspection will not be paid for				

64	02932039P	Cercocarpus Ledifolius (Curleaf Mountain Mahagony) - No. 1 Container	Each	
In Place. Missing or unacceptable plant material at the final plant inspection will not be paid for				

65	029360010	Establishment Period	Lump Sum
----	-----------	-----------------------------	----------

66 02765005* Pavement Marking Paint	Gallon
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In Place, Payment:

- A. The Department will not pay for removal of unauthorized, smeared, or damaged markings.
- B. Price reduction for paint application rate:

Rate	Pay Factor
At the specified rate	1.00
1-10 percent below the specified rate	0.75
11-15 percent below the specified rate	0.50
More than 15 percent below the specified rate	May be accepted at 0.40 percent or
	required to be repainted.

67	02891001P	Sign Type P-1 18 in X 18 in	Each
In Place			

68	028910105	Sign Type A-2, 24 inch X 30 inch	Each
In Place			

69	028910225	Sign Type P-2, 30 inch X 30 inch	Each
In Plac	e		

XIV. PDBS Project Summary Report

Summary Report Project: HPP-3462(1)3 NORTH OGDEN DIVIDE ROAD

Detail 10 - ROADWAY		Alt Group Alt # Description 0 0		
	Item Number	Description	Qty	Unit
	00830001U	Equal Opportunity Training	1,000	Hour
	012850010	Mobilization	1	Lump
	01554000*	Traffic Control	1	Lump
	01721001*	Survey	1	Lump
	02056005P	Borrow	7,429	cu yd
	020750030	Geotextiles - Drainage	221	sq yd
	022210075	Remove Guardrail	2,256	ft
	02222004*	Remove Asphalt Pavement	6,476	sq yd
	022310020	Clearing and Grubbing	6	Acre
	02316002P	Roadway Excavation (Plan Quantity)	61,110	cu yd
	023180020	Surface Ditch	300	ft
	02319000*	Rock Blasting	2,160	cu yd
	023730010	Loose Riprap	89	cu yd
	026100048	24 inch Corrugated Steel Pipe Culvert, Class A	47	ft
	026100052	36 inch Corrugated Steel Pipe Culvert, Class A	170	ft
	026100056	48 inch Corrugated Steel Pipe Culvert, Class A	239	ft
	02612000*	Pipe Anchor Assembly	15	Each
	026130040	Culvert End Section 24 inch	1	Each
	026130060	Culvert End Section 36 inch	1	Each
	026130080	Culvert End Section 48 inch	2	Each
	02615000*	Wall Drainage Assembly	7	Each
	026350030	Manhole Frame and Solid Cover, Std Dwg GF 2	3	Each
	026350050	Manhole Steps, Std Dwg GF 6	17	Each
	027210060	Untreated Base Course 3/4 inch Max	2,495	cu yd
	027410060	HMA - 3/4 inch	1,611	Ton
	02748001P	Liquid Asphalt MC-70 or MC-250	6	Ton
	027480050	Emulsified Asphalt SS-1H	3	Ton
	02771004*	Concrete Ditch	2,124	ft
	02821000*	Remove, Store and Reinstall Chain Link Fence	267	ft

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Summary Report Project: HPP-3462(1)3 NORTH OGDEN DIVIDE ROAD

Detail 10 - ROADWAY		Alt Group Alt # Description 0 0					
	Item Number	Description	Qty Unit				
	028410010	Beam Guardrail 2,7	00 ft				
	02841004*	Reset Concrete Barrier 6	86 ft				
	028410040	Precast Concrete Barrier	19 ft				
	028430010	Crash Cushion Type B	2 Each				
	028910005	Remove Sign	5 Each				
	02912003*	Strip and Stockpile Topsoil 2,4	61 cu yd				
	02912004*	Spread Stockpiled Topsoil 22,7	07 sq yd				
	032110010	Reinforcing Steel - Coated 1,4	51 lb				
	033100020	Concrete- Small Structure	15 cu yd				
Detail 20 - STRUCTURES		Alt Group Alt # Description 0 0					
	Item Number	Description	Qty Unit				
	02061002P	Free Draining Granular Backfill Borrow					
	02861000*	Post and Panel Retaining Wall 19,88					
	032110010	Reinforcing Steel - Coated	80 lb				
	033100010	Structural Concrete	1 Lump				
Detail 30 - LANDSCAPING		Alt Group Alt # Description 0 0	No. 11ch				
	1tem Number 01571002P		Oty Unit 36 Each				
	015710021		81 ft				
	015710040		64 ft				
	015710050		40 ft				
	01571008P		05 cu ft				
	015710090		22 ft				
	015740010	Environmental Control Supervisor	1 Lump				
	02373001P	Vegetated Riprap Swale	53 ft				
	02909000*	Channel Substrate 1,3	25 cu yd				
	02911001P	Wood Fiber Mulch	9 Acre				
	02911002*	Shredded Bark Mulch	6 cu yd				

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Summary Report Project: HPP-3462(1)3 NORTH OGDEN DIVIDE ROAD

Detail		Alt Group Alt # Description		
30 - LANDSC	APING	0 0		
	Item Number	Description	Qty	Unit
	029110020	Straw Mulch	1	Acre
	02913000*	Invasive Weed Control	1	Lump
	02922031*	Broadcast Seed Mix 1	6	Acre
	02932030P	Acer glabrum (Rocky Mountain Maple) - No. 1 Container	87	Each
	02932031P	Acer grandidenttum (Big-tooth Maple) - No. 1 Container	75	Each
	02932032P	Amelanchier utahensis (Utah Serviceberry) - No. 1 Container	23	Each
	02932034P	Cornus Sericea (Redosier dogwood) - No. 1 Container	55	Each
	02932036P	Prunus virginiana (Chokecherry) - No. 1 Container	45	Each
	02932037P	Quercus gambelii (Gambel Oak) - No. 1 Container	121	Each
	02932038P	Sambucus caerulea (Blue Elderberry) - No. 1 Container	12	Each
	02932039P	Cercocarpus ledifolius (Curleaf Mountain Mahagony) - No. 1 Container	36	Each
	029360010	Establishment Period	1	Lump
Detail 40 - SIGNING	ì	Alt Group Alt # Description 0 0		
	Item Number	Description	Qty	Unit
	02765005*	Pavement Marking Paint	36	gal
	02891001P	Sign Type P-1 18 in X 18 in	30	Each
	028910105	Sign Type A-2, 24 inch X 30 inch	4	Each
	028910225	Sign Type P-2, 30 inch X 30 inch	31	Each

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XV. PDBS Detailed Stationing Summaries Report

Detailed Report HPP-3462(1)3

NORTH OGDEN DIVIDE ROAD

10 - ROADWAY

Alt Group: 0

Alt #: 0

Item Number Description Use Qty Unit 02056005P **Borrow** 7,429 cu yd Line/Sheet From Station From Offset To Station To Offset Comment Qty WALL 4 CUR 56 13+29.54 22.9 RT 18+01.99 22.9 RT 921.0 WALL 3 CUR 56 5+00.00 22.9 RT 12+01.54 22.9 RT 1,995.0 EX AL WALL 1 43+00.00 22.9 RT 52+50.00 22.9 RT 2,858.0 EX AL 82+65.67 13.9 RT 89+50.00 13.1 RT 1,655.0 WALL 2

7,429.0

221.2

Version: 2

020750030	Geote	extiles - Draina	age				221	sq yd
Line/Sheet	t From Station	From Offset	To Station	To Offset	Qty	Comment		
CUR 56	10+50.0	21.0 RT			2.6	Wall Drain		
CUR 56	14+03.1	23.1 RT	14+03.1	28.0 RT	3.0			
CUR 56	16+25.0	21.0 RT			2.6	Wall Drain		
CUR 56	8+60.0	21.0 RT			2.6	Wall Drain		
EX AL	43+05.0	21.0 RT			2.6	Wall Drain		
EX AL	48+00.0	21.0 RT			2.6	Wall Drain		
EX AL	83+05.0	16.0 RT			2.6	Wall Drain		
EX AL	86+00.0	16.0 RT			2.6	Wall Drain		
HOR SH	8+16.4	111.0 RT			50.0	Outlet		
HOR SH	8+84.9	31.5 RT	5+56.0	48.0 RT	150.0	Drainage Ditch		

022210075	Remo	ve Guardrail					2,256	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment		
CUR 56	5+03.95	17.8 RT	17+98.57	17.1 RT	1,308.8	WALL 3 & 4		
EX AL	43+07.14	19.7 RT	52+49.31	17.1 RT	946.8	WALL 1		
				•	2,255.6			

Detailed Report HPP-3462(1)3 NORTH OGDEN DIVIDE ROAD

Version: 2

10 - ROADWAY Alt Group: 0 Alt #: 0

Item Numb		per Description						Use Qty	Unit	_
02222004* Remove Asphalt Pavement				avement				6,476	sq yd	
	Line/Sheet	t From Station	From Offset	To Station	To Offset	Qty	Comment			
	CUR 56	13+29.54	22.9 RT	18+01.99	22.9 RT	64.24	WALL 4			
	CUR 56	5+00.00	22.9 RT	12+01.54	22.9 RT	34.02	WALL 3			
	EX AL	168+20.00	0	172+38.02	0	1,156.39	CURVE 56			
	EX AL	43+00.00	22.9 RT	52+50.00	22.9 RT	105.03	WALL 1			
	EX AL	65+34.5	15.0 LT	65+34.5	15.0 RT	26.67	CULVERT			
	EX AL	82+75.00	22.9 RT	89+05.00	22.9 RT	76.12	WALL 2			
	EX AL	107+42.95	0	124+38.83	0	5,013.82	HORSESHOE			
					-	6,476.29				

022310020	Cleari	ng and Grubl	oing			6 Acre
Line/Sheet	t From Station	From Offset	To Station	To Offset	Qty	Comment
CUR 56	10+80.00	LT	14+95.00	LT	0.172	
CUR 56	10+80.00	RT	14+95.00	RT	0.099	
CUR 56	14+95.00		18+01.98		0.06	WALL 4 (REST OF WALL WITH CURVE 56 RT)
CUR 56	5+00.00		10+80		0.11	WALL 3 (REST OF WALL WITH CURVE 56 RT)
EX AL	43+00.00		52+50		0.17	WALL 1
EX AL	83+00.00		89+05.00		0.11	WALL 2
HOR SH	3+50.00	RT/LT	17+50.00	RT/LT	5.57	
				_	6.291	

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Detailed Report HPP-3462(1)3 NORTH OGDEN DIVIDE ROAD

Version: 2

10 - ROADWAY Alt Group: 0 Alt #: 0

Item Numb	er	Description				Use Qty Unit
02316002P	Roady	Roadway Excavation (Plan Qua				61,110 cu yd
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
CUR 56	10+80	0	11+00	0	0.0	0 CU YD EMBANKMENT
CUR 56	11+00		11+25	0	43.45	10 CU YD EMBANKMENT
CUR 56	11+25	0	11+50	0	36.33	21 CU YD EMBANKMENT
CUR 56	11+50	0	11+75	0	36.66	25 CU YD EMBANKMENT
CUR 56	11+75	0	12+00	0	39.98	18 CU YD EMBANKMENT
CUR 56	12+00	0	12+25	0	47.86	8 CU YD EMBANKMENT
CUR 56	12+25	0	12+50	0	61.12	2 CU YD EMBANKMENT
CUR 56	12+50	0	12+75	0	66.04	3 CU YD EMBANKMENT
CUR 56	12+75	0	13+00	0	59.52	8 CU YD EMBANKMENT
CUR 56	13+00	0	13+25	0	53.96	15 CU YD EMBANKMENT
CUR 56	13+25	0	13+50	0	46.2	14 CU YD EMBANKMENT
CUR 56	13+50	0	13+75	0	41.88	12 CU YD EMBANKMENT
CUR 56	13+75	0	14+00	0	38.98	17 CU YD EMBANKMENT
CUR 56	14+00	0	14+25	0	36.49	24 CU YD EMBANKMENT
CUR 56	14+25	0	14+50	0	37.3	32 CU YD EMBANKMENT
CUR 56	14+50	0	14+75	0	37.18	31 CU YD EMBANKMENT
CUR 56	14+75	0	14+95	0	73.16	51 CU YD EMBANKMENT
HOR SH	10+00	0	10+25	0	1.0	811 CU YD EMBANKMENT
HOR SH	10+25	0	10+50	0	107.0	264 CU YD EMBANKMENT
HOR SH	10+50	0	10+75	0	229.0	251 CU YD EMBANKMENT
HOR SH	10+75	0	11+00	0	188.0	341 CU YD EMBANKMENT
HOR SH	11+00	0	11+25	0	456.0	407 CU YD EMBANKMENT
HOR SH	11+25	0	11+50	0	1,795.0	523 CU YD EMBANKMENT
HOR SH	11+50	0	.11+75	0	3,551.0	543 CU YD EMBANKMENT
HOR SH	11+75	0	12+00	0	4,764.0	477 CU YD EMBANKMENT
HOR SH	12+00	0	12+25	0	5,558.0	417 CU YD EMBANKMENT
HOR SH	12+25	0	12+50	0	5,972.0	395 CU YD EMBANKMENT
HOR SH	12+50	0	12+75	0	5,904.0	431 CU YD EMBANKMENT
HOR SH	12+75	0	13+00	0	5,470.0	490 CU YD EMBANKMENT
HOR SH	13+00	0	13+25	0	4,869.0	578 CU YD EMBANKMENT
HOR SH	13+25	0	13+50	0	4,114.0	679 CU YD EMBANKMENT
HOR SH	13+50	0	13+75	0	3,208.0	699 CU YD EMBANKMENT
HOR SH	13+75	0	14+00	0	2,299.0	620 CU YD EMBANKMENT
HOR SH	14+00	0	14+25	0	1,612.0	461 CU YD EMBANKMENT
HOR SH	14+25	0	14+50	0	1,290.0	276 CU YD EMBANKMENT
HOR SH	14+50	0	14+75	0	1,205.0	150 CU YD EMBANKMENT
HOR SH	14+75	0	15+00	0	1,154.0	95 CU YD EMBANKMENT

Detailed Report HPP-3462(1)3

Version: 2

NORTH OGDEN DIVIDE ROAD

			NONTHOO	DEN DIVIDE	NUAD	
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
HOR SH	15+00	0	15+25	0	1,062.0	61 CU YD EMBANKMENT
HOR SH	15+25	0	15+50	0	948.0	22 CU YD EMBANKMENT
HOR SH	15+50	0	15+75	0	848.0	2 CU YD EMBANKMENT
HOR SH	15+75	0	16+00	0	771.0	0 CU YD EMBANKMENT
HOR SH	16+00	0	16+25	0	715.0	0 CU YD EMBANKMENT
HOR SH	16+25	0	16+50	0	637.0	0 CU YD EMBANKMENT
HOR SH	16+50	0	16+75	0	451.0	0 CU YD EMBANKMENT
HOR SH	16+75	0	17+00	0	187.0	0 CU YD EMBANKMENT
HOR SH	17+00	0	17+25	0	55.0	0 CU YD EMBANKMENT
HOR SH	17+25	0	17+50.00	0	56.0	0 CU YD EMBANKMENT
HOR SH	3+75	0	4+00	0	0.0	0 CU YD EMBANKMENT
HOR SH	4+00	0	4+25	0	54.0	0 CU YD EMBANKMENT
HOR SH	4+25	0	4+50	0	53.0	0 CU YD EMBANKMENT
HOR SH	4+50	0	4+75	0	54.0	0 CU YD EMBANKMENT
HOR SH	4+75	0	5+00	0	57.0	0 CU YD EMBANKMENT
HOR SH	5+00	0	5+25	0	68.0	0 CU YD EMBANKMENT
HOR SH	5+25	0	5+50	0	77.0	0 CU YD EMBANKMENT
HOR SH	5+50	0	5+75	0	89.0	0 CU YD EMBANKMENT
HOR SH	5+75	0	6+00	0	107.0	0 CU YD EMBANKMENT
HOR SH	6+00	0	6+25	0	106.0	56 CU YD EMBANKMENT
HOR SH	6+25	0	6+50	0	78.0	170 CU YD EMBANKMENT
HOR SH	6+50	0	6+75	0	48.0	333 CU YD EMBANKMENT
HOR SH	6+75	0	7+00	0	36.0	496 CU YD EMBANKMENT
HOR SH	7+00	0	7+25	0	24.0	712 CU YD EMBANKMENT
HOR SH	7+25	0	7+50	0	11.0	1011 CU YD EMBANKMENT
HOR SH	7+50	0	7+75	0	3.0	1321 CU YD EMBANKMENT
HOR SH	7+75	0	8+00	0	0.0	1845 CU YD EMBANKMENT
HOR SH	8+00	0	8+25	0	0.0	2379 CU YD EMBANKMENT
HOR SH	8+25	0	8+50	0	0.0	2744 CU YD EMBANKMENT
HOR SH	8+50	0	8+75	0	2.0	3139 CU YD EMBANKMENT
HOR SH	8+75	0	9+00	0	6.0	3502 CU YD EMBANKMENT
HOR SH	9+00	0	9+25	0	4.0	3706 CU YD EMBANKMENT
HOR SH	9+25	0	9+50	0	0.0	3547 CU YD EMBANKMENT
HOR SH	9+50	0	9+75	0	0.0	2837 CU YD EMBANKMENT
HOR SH	9+75	0	10+00	0	1.0	1799 CU YD EMBANKMENT

61,110.11

Version: 2

10 - ROADWAY

EX AL

EX AL

HOR SH 8+16.4

HOR SH 8+84.9

83+05.0

86+00.0

16.0 RT

16.0 RT

111.0 RT

31.5 RT

5+56.0

Alt Group: 0 Alt #: 0

HOADWAI		Ait Gloup.	J Alt W. U					
Item Numb	per	Descript	ion				Use Qty	Unit
023180020	Surfa	ce Ditch					300	ft
Line/Sheet	t From Station	From Offset	To Station	To Offset	Qty	Comment		
HOR SH		31.5 RT	5+56.0	48.0 RT	300.0	Roadway Drainage Ditch		
					300.0			
					000.0			
02319000*	Rock	Blasting					2,160	cu yd
	t From Station	_	To Station	To Offset	Qty	Comment	,	7.
	10+75.0	LT	14+75.0	LT	2,160.0	Comment		
					2,160.0			
023730010	Loose	e Riprap					89	cu yd
	t From Station		To Station	To Offset	Qty	Comment		
CUR 56	10+50.0	21.0 RT	10 Station	10 Oliset	0.42	Wall Drain		
CUR 56	14+03.1	23.1 RT	14+03.1	28.0 RT	1.0			
CUR 56	16+25.0	21.0 RT		20.0 111	0.42			
CUR 56	8+60.0	21.0 RT			0.42	Wall Drain		
EX AL					0.42	Wall Drain		
	43+05.0	21.0 RT						
EX AL	48+00.0	21.0 RT			0.42	Wall Drain		

25.0 88.94

0.42

0.42

60.0

Wall Drain

Wall Drain

Culvert Outlet Drainage Ditch

48.0 RT

Version: 2

NORTH OGDEN DIVIDE ROAD

10 - ROADWAY

Item Numb	oer	Descript	ion				Use Qty	Unit
026100048	24 inc	h Corrugated	Steel Pipe (Culvert, Class A			47	ft
Line/Shee	t From Station	From Offset	To Station	To Offset	Qty	Comment		
CUR 56	14+03.2	11.0 RT	14+03.2	25.0 RT	11.0	CULVERT		
CUR 56	14+03.2	23.6 LT	14+03.2	25.0 RT	36.0	CULVERT		
					47.0			
026100052	36 inc	h Corrugated	l Steel Pipe (Culvert, Class A			170	ft
	t From Station	_	-	To Offset	Qty	Comment		
EX AL	65+29.4	11.0 RT	64+72.0	130.0 RT	137.6	Comment		
EX AL	65+34.5	24.7 LT	65+29.4	11.0 RT	32.0			
					169.6			
026100056	48 inc	h Corrugated	l Steel Pipe (Culvert, Class A			239	ft
Line/Shee	t From Station	From Offset	To Station	To Offset	Qty	Comment		
HOR SH		102.6 RT	8+16.4	111.0 RT	12.0			
HOR SH	9+39.7	105.7 LT	8+27.4	102.6 RT	227.0			
				-	239.0			
00040000**	<u>.</u> .						4-	F. J.
02612000*	_	Anchor Asser		T 0"	6.		15	Each
Line/Shee	t From Station 65+29.4	From Offset 11.0 RT	To Station 64+72.00	To Offset 130.0 RT	Qty 15.0	Comment		
	30120.4		J-172.00					
					15.0			

Version: 2

NORTH OGDEN DIVIDE ROAD

10 - ROADWAY

Item Numb	er	Descripti	on				Use Qty	Unit	
026130040	Culve	rt End Section	n 24 inch				1	Each	
	From Station 14+03.2	From Offset 25.0 LT	To Station	To Offset	Oty 1.0 1.0	Comment			
	Culver From Station 65+34.0	rt End Section From Offset 24.7 LT		To Offset	Oty 1.0 1.0	Comment	1	Each	
026130080 Line/Sheet HOR SH HOR SH	From Station 8+16.4	rt End Section From Offset 111.0 RT 105.7 LT		To Offset	Oty 1.0 1.0	Comment	2	Each	

Version: 2

NORTH OGDEN DIVIDE ROAD

10 - ROADWAY

Item Numb	ber	Descript						
02615000*	Wall	Drainage Asse	embly				7	Each
Line/Shee	t From Statio	n From Offset	To Station	To Offset	Qty	Comment		
CUR 56	10+50.0	20.6 RT			1.0	WALL 3		
CUR 56	16+25.0	20.6 RT			1.0	WALL 4		
CUR 56	8+60.00	20.6 RT			1.0	WALL 3		
EX AL	43+05.00	20.6 RT			1.0	WALL 1		
EX AL	48+00.00	20.6 RT			1.0	WALL 1		
EX AL	83+05.0	15.8 RT			1.0	WALL 2		
EX AL	86+00.00	15.8 RT			1.0	WALL 2		
					7.0			
026350030	Man	hole Frame an	d Solid Cove	r, Std Dwg GF 2			3	Each
Line/Shee CUR 56 EX AL	et From Statio 14+03.0 65+29.4	n From Offset 11.0 RT 11.0 RT		r, Std Dwg GF 2 To Offset	Qty 1.0 1.0	Comment	3	Each
Line/Shee	et From Statio 14+03.0 65+29.4	n From Offset 11.0 RT		_	1.0 1.0 1.0	Comment	3	Each
CUR 56 EX AL	et From Statio 14+03.0 65+29.4	n From Offset 11.0 RT 11.0 RT		_	1.0 1.0	Comment	3	Each
Line/Shee CUR 56 EX AL	et From Statio 14+03.0 65+29.4 8+27.4	n From Offset 11.0 RT 11.0 RT	To Station	_	1.0 1.0 1.0	Comment	3 17	Each
Line/Shee CUR 56 EX AL HOR SH	t From Statio 14+03.0 65+29.4 8+27.4 Man	n From Offset 11.0 RT 11.0 RT 102.6 RT	To Station	_	1.0 1.0 1.0 3.0	Comment		
Line/Shee CUR 56 EX AL HOR SH 026350050 Line/Shee CUR 56	Man et From Statio 14+03.0 65+29.4 8+27.4 Man et From Statio 14+03.0	n From Offset 11.0 RT 11.0 RT 102.6 RT hole Steps, Ste 11.0 RT	To Station	To Offset	1.0 1.0 1.0 3.0 Qty 7.0			
Line/Shee CUR 56 EX AL HOR SH	t From Statio 14+03.0 65+29.4 8+27.4 Man	n From Offset 11.0 RT 11.0 RT 102.6 RT	To Station	To Offset	1.0 1.0 1.0 3.0			
Line/Shee CUR 56 EX AL HOR SH 026350050 Line/Shee CUR 56	Man et From Statio 14+03.0 65+29.4 8+27.4 Man et From Statio 14+03.0 65+29.4	n From Offset 11.0 RT 11.0 RT 102.6 RT hole Steps, Ste 11.0 RT	To Station	To Offset	1.0 1.0 1.0 3.0 Qty 7.0			

NORTH OGDEN DIVIDE ROAD

10 - ROADWAY Alt Group: 0 Alt #: 0

_	Item Numb	oer	Descript	ion				Use Qty	Unit	
	027210060	Untre	ated Base Co	urse 3/4 incl	n Max			2,495	cu yd	
	Line/Sheet	t From Station	From Offset	To Station	To Offset	Qty	Comment			
	CUR 56	10+80.00	RT/LT	14+95.00	RT/ LT	140.5				
	CUR 56	13+29.54	22.9 RT	18+01.99	22.9 RT	325.2	WALL 4			
	CUR 56	5+00.00	22.9 RT	12+01.54	22.9 RT	363.2	WALL 3			
	EX AL	43+00.00	22.9 RT	52+50.00	22.9 RT	374.1	WALL 1			
	EX AL	65+34.5	15.0 LT	65+34.5	15.0 RT	4.5	CULVERT			
	EX AL	82+65.67	13.9 RT	89+50.00	13.1 RT	283.2	WALL 2			
	HOR SH	3+50.00	0	17+50.00	0	1,004.0				
						2,494.7				

Version: 2

027410060	нма -	- 3/4 inch					1,611	Ton
Line/Sheet	t From Station	From Offset	To Station	To Offset	Qty	Comment		
CUR 56	12+01.54	RT/LT	13+29.54	RT/LT	92.1			
CUR 56	13+29.54	22.9 RT	18+01.99	22.9 RT	142.3	WALL 4		
CUR 56	5+00.00	22.9 RT	12+01.54	22.9 RT	134.4	WALL 3		
EX AL	43+00.00	22.9 RT	52+50.00	22.9 RT	124.0	WALL 1		
EX AL	65+34.5	15.0 LT	65+34.5	15.0 RT	6.53	CULVERT		
EX AL	82+65.67	13.9 RT	89+50.00	13.1 RT	133.4	WALL 2		
HOR SH	3+50.00	0	17+50.00	0	978.0			
				-	1,610.73			

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Version: 2

10 - ROADWAY

Alt Group: 0 Alt #: 0

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Item Numb	er	Descri	iption				Use Qty	Unit
02748001P	Liquio	d Asphalt I	MC-70 or MC-2	50			6	Ton
Line/Sheet	From Station	From Offse	et To Station	To Offset	Qty	Comment		
CUR 56	12+01.54	RT/LT	13+29.54	RT/LT	0.34			
CUR 56	13+29.54	22.9 RT	18+01.99	22.9 RT	0.51	WALL 4		
CUR 56	5+00.00	22.9 RT	12+01.54	22.9 RT	0.48	WALL 3		
EX AL	43+00.00	22.9 RT	52+50.00	22.9 RT	0.41	WALL 1		
EX AL	82+65.67	13.9 RT	89+50.00	13.1 RT	0.44	WALL 2		
HOR SH	3+50.00	0	17+50.00	0	4.0			
					6.18			
027480050	Emuls	sified Aspha	alt SS-1H				3	Ton
Line/Sheet	From Station	From Offse	et To Station	To Offset	Qty	Comment		
CUR 56	12+01.54	RT	13+29.54	RT	0.14			
CUR 56	13+29.54	22.9 RT	18+01.99	22.9 RT	0.21	WALL 4		
CUR 56	5+00.00	22.9 RT	12+01.54	22.9 RT	0.19	WALL 3		
EX AL	43+00.00	22.9 RT	52+50.00	22.9 RT	0.17	WALL 1		
EX AL	82+65.67	13.9 RT	89+50.00	13.1 RT	0.18	WALL 2		
HOR SH	3+50.00	0	17+50.00	0	2.0			
					2.89			
02771004*	Concr	ete Ditch					2,124	ft
Line/Sheet	From Station	From Offse	et To Station	To Offset	Qty	Comment		
CUR 56	13+29.54	20.6 RT	18+01.98	20.6 RT	472.5	WALL 4		
CUR 56	5+00.0	20.6 RT	12+01.54	20.6 RT	701.5	WALL 3		
EX AL	43+00.0	20.6 RT	52+50.0	20.6 RT	950.0	WALL 1		

2,124.0

Version: 2

10 - ROADWAY

oer	Descript	ion				Use Qty	Unit
Remo	ve, Store and	Reinstall Ch	ain Link Fence			267	ft
t From Station	From Offset	To Station	To Offset	Qty	Comment		
6+62.69	93.11 RT	8+18.90	25.46 RT	139.6			
8+18.90	25.46 RT	8+63.26	41.63 RT	42.4			
8+63.26	41.63 RT	7+95.00	109.9 RT	84.7			
			_	266.7			
Beam	Guardrail					2,700	ft
			To Offset	Qty	Comment		
5+00.00							
					WALL 1		
6+30.00	18.6 RT	10+53.30	18.6 RT	377.7			
				2,700.1			
Reset	Concrete Ba	rrier				686	ft
0							
t From Station	From Offset	To Station	To Offset	Qty	Comment		
216+39.08	From Offset 12.9 RT	To Station 217+03.76	To Offset 15.6 RT	Qty 59.5			
					WALL 2		
216+39.08	12.9 RT	217+03.76	15.6 RT	59.5			
216+39.08	12.9 RT	217+03.76	15.6 RT	59.5 626.4			
216+39.08 82+77.5	12.9 RT	217+03.76 89+02.9	15.6 RT	59.5 626.4		119	ft
216+39.08 82+77.5	12.9 RT 20.9 RT st Concrete E	217+03.76 89+02.9 Barrier	15.6 RT	59.5 626.4	WALL 2 Comment	119	ft
216+39.08 82+77.5 Preca	12.9 RT 20.9 RT st Concrete E	217+03.76 89+02.9 Barrier	15.6 RT 14.7 RT	59.5 626.4 685.9	WALL 2	119	ft
	Beam et From Station 6+62.69 8+18.90 8+63.26 Beam et From Station 5+00.00 42+44.00 6+30.00 Reset	Remove, Store and state From Station From Offset	Remove, Store and Reinstall Chapter From Station et From Station From Offset To Station 6+62.69 93.11 RT 8+18.90 8+18.90 25.46 RT 8+63.26 8+63.26 41.63 RT 7+95.00 Beam Guardrail et From Station From Offset To Station 5+00.00 18.6 RT 18+01.98 42+44.00 18.6 RT 52+50.00	Remove, Store and Reinstall Chain Link Fence of From Station From Offset To Station To Offset 6+62.69 93.11 RT 8+18.90 25.46 RT 8+18.90 25.46 RT 8+63.26 41.63 RT 8+63.26 41.63 RT 7+95.00 109.9 RT Beam Guardrail of From Station From Offset To Station To Offset 5+00.00 18.6 RT 18+01.98 18.6 RT 42+44.00 18.6 RT 52+50.00 18.6 RT 6+30.00 18.6 RT 10+53.30 18.6 RT	Remove, Store and Reinstall Chain Link Fence	Remove, Store and Reinstall Chain Link Fence	Remove, Store and Reinstall Chain Link Fence 267

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10 - ROADWAY

		Alt #: 0					
Item Number	Description					Use Qty	Unit
028430010 Cras	sh Cushion Type E	3				2	Each
Line/Sheet From Statio	on From Offset To 18.6 RT	Station	To Offset	Qty 1.0	Comment		
HOR SH 6+30.0	18.6 RT			1.0			
				2.0			
028910005 Rem	nove Sign					5	Each
Line/Sheet From Statio		Station	To Offset	Qty	Comment		
CUR 56 17+60.00	RT			1.0			
EX AL 10+50.00	RT			1.0			
EX AL 102.25.00	RT			1.0			
EX AL 279+79.00	RT			1.0			
EX AL 45+80.00	RT			1.0			
				5.0			
						0.101	
_	o and Stockpile To		T 0"			2,461	cu yd
Line/Sheet From Statio	n From Offset To	Station	To Offset	Qty 2 461 0	Comment USING 4" THICK TO		cu yd
_	n From Offset To		To Offset	2,461.0	Comment USING 4" THICK TO		cu yd
Line/Sheet From Statio	n From Offset To	Station	To Offset				cu yd
Line/Sheet From Statio HOR SH 3+50.00	n From Offset To	Station 7+50.00	To Offset	2,461.0			cu yd sq yd
Line/Sheet From Statio HOR SH 3+50.00	on From Offset To RT/LT 17	o Station (+50.00		2,461.0	USING 4" THICK TO	PSOIL	
Line/Sheet From Statio HOR SH 3+50.00	ead Stockpiled Top	o Station (+50.00	To Offset To Offset LT/RT	2,461.0		PSOIL	
Line/Sheet From Station HOR SH 3+50.00 02912004* Spre Line/Sheet From Station	ead Stockpiled Top on From Offset To RT/LT 17	Station 7+50.00	To Offset	2,461.0 2,461.0 Qty	USING 4" THICK TO	PSOIL	

NORTH OGDEN DIVIDE ROAD

10 - ROADWAY

Alt Group: 0 Alt #: 0

Item Number	or Description				Use Qty	Unit	
032110010	Reinforcing Steel - Coated				1,451	lb	
Line/Sheet From	Station From Offset To Station	To Offset	Qty	Comment			

Version: 2

			 	,
CUR 56	14+03.0	11.0 RT		522.0
EX AL	65+29.4	11.0 RT		375.0
HOR SH	8+27.4	102.6 RT		554.0
			•	1,451.0

033100020	Concrete- Small Structure	15	cu yd

Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
CUR 56	14+03.0	11.0 RT			5.5	CULVERT
EX AL	65+29.4	11.0 RT			4.0	CULVERT
HOR SH	8+27.4	102.6 RT			5.25	CULVERT

14.75

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NORTH OGDEN DIVIDE ROAD

20 - STRUCTURES

Item Numb	er	Descript	ion				Use Qty	Unit
02061002P	Free D	Oraining Gran	ular Backfill	Borrow			10	cu yd
	From Station 14+50.0	From Offset 25.0 RT	To Station	To Offset	Qty 10.0	Comment HEADWALL		
					10.0			
02861000*	Post a	and Panel Re	taining Wall				19,887	sq ft
	From Station			To Offset	Qty	Comment		
CUR 56	13+29.54	22.9 RT	18+01.99	22.9 RT	3,490.0	WALL 4		
CUR 56	5+00.00	22.9 RT	12+01.54	22.9 RT	4,963.0	WALL 3		
EX AL	43+00.00	22.9 RT	52+50.00	22.9 RT	6,814.0	WALL 1		
EX AL	83+00.00	22.9 RT	89+05.00	22.9 RT	4,620.0	WALL 2		
					19,887.0			
032110010	Reinfr	orcing Steel -	Coated				280	lb
	From Station	_		To Offset	Qty	Comment	_00	
	14+50.0	23.0 RT	. o otation	10 011301	280.0	Headwall		
					280.0			
033100010	Struct	ural Concrete	е				1	Lump
	From Station		To Station	To Offset	Qty	Comment		
CUR 56	14+50.0	25.0 RT			1.0	4.2 CY - Headwall		
					1.0			

Version: 2

40 - SIGNING Alt Group: 0 Alt #: 0

Item Numb	oer	Descript	ion			Use Qty Unit
02765005*	Paver	nent Marking	Paint			36 gal
Line/Sheet	t From Station	From Offset	To Station	To Offset	Qty	Comment
CH CR	4+00.00	0	12+00.00	0	5.0	DOUBLE YELLOW
CH CR	4+60.50	11 RT	11+04.00	11 RT	2.0	SOLID WT LINE (SHOULDER)
CH CR	5+64.00	11 LT	10+51.00	11 LT	1.51	SOLID WT LINE (SHOULDER)
CUR 56	10+80.00	0	14+75.00	0	2.44	DOUBLE YELLOW
CUR 56	11+27.20	11 LT	14+29.20	11 LT	0.94	SOLID WT LINE (SHOULDER)
CUR 56	5+24.50	11 RT	17+88.19	11 RT	3.94	SOLID WT LINE (SHOULDER) WALL 3 & 4
EX AL	43+56.00	11 RT	51+76.00	11 RT	2.55	SOLID WT LINE (SHOULDER) WALL 1
EX AL	82+75.00	11 RT	89+05.00	11 RT	2.0	SOLID WT LINE (SHOULDER) WALL 2
HOR SH	3+50.00	0	17+50.00	0	8.64	DOUBLE YELLOW
HOR SH	3+75.40	11 RT	16+10.00	11 RT	4.0	SOLID WT LINE (SHOULDER)
HOR SH	6+00.00	11 LT	16+10.00	11 LT	3.14	SOLID WT LINE (SHOULDER)
				=	00.10	

36.16

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Version: 2

40 - SIGNING Alt Group: 0 Alt #: 0

Item Numb	oer	Description			Use Qty Unit
02891001P	Sigr	1 Type P-1 18 in X 18 in			30 Each
Line/Sheet	t From Statio	on From Offset To Station	To Offset	Qty	Comment
EX AL	107+92	RT		1.0	
EX AL	124+40	LT		1.0	
EX AL	129+90	RT		1.0	
EX AL	133+40	LT		1.0	
EX AL	168+05	RT		1.0	CURVE 56 STA 10+65
EX AL	189+31	LT		1.0	
EX AL	192+03	RT		1.0	
EX AL	195+32	LT		1.0	
EX AL	195+48	RT		1.0	
EX AL	197+31	LT		1.0	
EX AL	198+19	LT		1.0	
EX AL	212+89	RT		1.0	
EX AL	242+81	RT		1.0	
EX AL	246+60	LT		1.0	
EX AL	47+20	RT		1.0	
EX AL	50+58	LT		1.0	
EX AL	52+27	RT		1.0	
EX AL	59+24	RT		1.0	
EX AL	73+96	RT		1.0	
EX AL	76+22	LT		1.0	
EX AL	170+46	LT		1.0	CURVE 56 STA 15+04
EX AL	182+47	RT		1.0	
EX AL	193+80	RT		1.0	
EX AL	222+04	LT		1.0	
EX AL	54+84	RT		1.0	
EX AL	56+06	LT		1.0	
EX AL	59+34	LT		1.0	
EX AL	63+77	RT		1.0	
EX AL	65+13	LT		1.0	
EX AL	66+73	LT		1.0	
			-	30.0	

NORTH OGDEN DIVIDE ROAD

40 - SIGNING Alt Group: 0 Alt #: 0

Item Numb	per	Descript	ion				Use Qty	Unit	
028910105	Sign	Type A-2, 24 i	inch X 30 inc	eh			4	Each	
Line/Sheet	t From Station	From Offset	To Station	To Offset	Qty	Comment			
EX AL	00+00	LT			1.0	30 MPH SPEED LIMIT			
EX AL	00+00	RT			1.0	30 MPH SPEED LIMIT			
EX AL	246+71	LT			1.0	30 MPH SPEED LIMIT			
EX AL	246+71	RT			1.0	30 MPH SPEED LIMIT			
					4.0				

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Version: 2

40 - SIGNING Alt Group: 0 Alt #: 0

Item Numb	oer	Description			Use Qty Unit
028910225	Sig	n Type P-2, 30 inch X 30) inch		31 Each
Line/Sheet	t From Stati	on From Offset To Statio	n To Offset	Qty	Comment
EX AL	107+92	RT		1.0	
EX AL	124+40	LT		1.0	
EX AL	129+90	RT		1.0	
EX AL	133+40	LT		1.0	
EX AL	168+05	RT		1.0	CURVE 56 STA 10+65
EX AL	189+31	LT		1.0	
EX AL	192+03	RT		1.0	
EX AL	195+32	LT		1.0	
EX AL	195+48	RT		1.0	
EX AL	197+31	LT		1.0	
EX AL	198+19	LT		1.0	
EX AL	212+89	RT		1.0	
EX AL	233+15	LT		1.0	ANIMAL X-ING
EX AL	242+81	RT		1.0	
EX AL	246+60	LT		1.0	
EX AL	47+20	RT		1.0	
EX AL	50+58	LT		1.0	
EX AL	52+27	RT		1.0	
EX AL	59+24	RT		1.0	
EX AL	73+96	RT		1.0	
EX AL	76+22	LT		1.0	
EX AL	170+46	LT		1.0	CURVE 56 STA 15+04
EX AL	182+47	RT		1.0	
EX AL	193+80	RT		1.0	
EX AL	222+04	LT		1.0	
EX AL	54+84	RT		1.0	
EX AL	56+06	LT		1.0	
EX AL	59+34	LT		1.0	
EX AL	63+77	RT		1.0	
EX AL	65+13	LT		1.0	
EX AL	66+73	LT		1.0	
			-	31.0	

XVI. Special Provisions

SECTION 00555M

PROSECUTION AND PROGRESS

PART 1 GENERAL

Add the following to paragraph 1.6 CRITICAL PATH METHOD SCHEDULE PREPARED BY THE CONTRACTOR:

- B. 2. Establish milestones in the schedule for substantial completion.
 - 3. Bring project to substantial completion.

Delete paragraph A and B for 1.12 LIMITATION OF OPERATIONS

1.18 FAILURE TO COMPLETE ON TIME

Add the following to paragraph A.

DEPARTMENT deducts from any money due, the sum specified in the following Schedule of Liquidated Damages (Table 1) for each working day that North Ogden Canyon Road remains closed from December 1 through February 29 inclusive.

Add the following paragraphs to PART 1 GENERAL:

1.22 ROCK CUT

Rock cut on a 1H:4V slope in Curve 56 area that is not stable shall be re-sloped on a 2H:1V slope as directed by the ENGINEER. Additional costs associated with excavation and landscaping will be made to the contract in accordance with Section 00725 Scope of Work.

Rock cut on a 1H:1V slope in Horseshoe area that is not stable shall be re-sloped on a 2H:1V slope as directed by the ENGINEER. Additional costs associated with excavation and landscaping will be made to the contract in accordance with Section 00725 Scope of Work.

Prosecution and Progress 00555M - 1 of 2

1.23 CHANNEL CONSTRUCTION

Minimize disturbance of existing soil and vegetation outside of fill limits for channel construction. Any disturbance will be seeded and planted with approved seed and No. 1 Container species. Additional payment will not be provided to mitigate for excessive disturbance.

SECTION 00725M

SCOPE OF WORK

PART 1 GENERAL

Add the following paragraph to 1.2 INTENT OF CONTRACT:

B. Intent of this contract is to provide safety improvements. Work includes, but is not limited to, road widening, road realignment, retaining walls, drainage facilities, beam guard rail, resetting concrete barrier, rock blasting, signing, and striping.

SECTION 00727M

CONTROL OF WORK

PART 1 GENERAL

Add the following paragraph to section 1.3 PLANS AND WORKING DRAWINGS.

A. Project cross sections and geotechnical report are available at:

Washington Group International 960 West LeVoy Dr. Suite 170 Salt Lake City, UT 84123

Phone: 801-268-8391 ext. 252

Contact: Wes Starkenburg

All or portions of the document may be obtained for the cost of production.

Add the following paragraph to section 1.7 COOPERATION WITH UTILITIES:

H. Qwest has fiber-optic cable throughout the project area. Contact Mr. Jeff Stapley of Qwest Corporation 14 days prior to beginning of construction activities. Mr. Stapley can be reached at (801) 974-8505.

SECTION 01282M

PAYMENT

PART 1 GENERAL

Delete Article 1.13 G2 and renumber 3 to 2

SECTION 01284S

PROMPT PAYMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This Section applies to prime Contractors, all subcontractors, all service providers and all material suppliers, and any lower tier subcontractors, service providers, and suppliers.

1.2 PROMPT PAYMENT TO SUBCONTRACTORS, MATERIAL SUPPLIERS AND SERVICE PROVIDERS - PROGRESS PAYMENTS

- A. Include in subcontract, service or purchase agreement language agreeing to pay as promptly as or sooner than required by this specification.
- B. Pay subcontractor, service provider, or material supplier for satisfactory performance of the subcontract, service or material supply agreement no later than 10 work days after receipt of payment.
- C. Submit to the Engineer within 5 work days after paying subcontractor(s), service providers, or material supplier(s), a certified payment statement in the form of an affidavit certifying that the total dollar amount paid to each subcontractor, service provider or supplier that the payment has been made promptly, and that the dollar amount paid is the total amount due for work or services performed or materials purchased during the pay period. Contractor is required to submit the affidavit on Contractor's letterhead and include the signature of a responsible official legally representing the Contractor.

1.3 PAYMENT TO SUBCONTRACTORS, SUPPLIERS AND SERVICE PROVIDERS - RETAINED MONEY AND ACCRUED INTEREST

- A. Include in subcontract, service or purchase agreement language agreeing to pay retained money and accrued interest upon satisfactory completion of the work of subcontract, service or purchase agreement.
- B. Pay retained money and accrued interest to subcontractor, service or material provider no later than 25 work days after satisfactory completion of the work of subcontract, service or purchase agreement.
- C. Payment of retained money and accrued interest must be paid even if the Contractor has not received payment from the Department.
- D. Submit to the Engineer within 5 work days after paying subcontractor, supplier, or service provider a certified payment statement in the form of an affidavit certifying that the total amount paid is the total amount of retained money and interest due to the subcontractor, service provider or supplier. Provide a signed affidavit by a responsible official legally representing the Contractor, on Contractor's letterhead.
- E. A determination of satisfactory completion and payment of retained money and accrued interest does not relieve the Contractor, subcontractor, service provider nor supplier from any contractual obligation.

1.4 DELAY OF PAYMENT

- A. Delay payment to subcontractor, service provider, or supplier, only for good cause, with prior written notice to subcontractor, service provider or supplier and with prior written approval of the Engineer.
- B. Give subcontractor, service provider or supplier time to correct deficiencies before estimate cut-off date
- C. Not giving notice to subcontractor, service provider, or supplier nor receiving written approval from Engineer will be considered as implied consent to pay promptly.
- D. Engineer withholds from progress payment, delayed payments.
- E. Include in subcontract, service and supply agreements, language providing for the use of appropriate alternative dispute resolution mechanisms to resolve payment disputes.

Prompt Payment 01284S - 2 of 4

F. Department holds in escrow disputed funds until the dispute is resolved.

1.5 PENALTIES FOR FAILURE TO MAKE PROMPT PAYMENT

- A. Department will not reimburse for work performed by subcontractors, service providers nor materials delivered by suppliers unless and until the Contractor ensures that subcontractors, service providers and suppliers are promptly paid for work performed or materials delivered.
 - 1. Engineer deducts the dollar amount due but not paid to subcontractor, service provider or supplier from the next progress payment.
 - 2. Engineer may deduct an equal amount from the Contractor's payment.
- B. Department considers the failure to pay promptly an indication of a lack of financial fitness.
 - 1. Forfeit the privilege of bidding on the Department's projects as a prime Contractor until subcontractors, service providers or suppliers are paid.
 - 2. Forfeit the privilege of having a subcontract, supply or purchase agreement approved to perform as a subcontractor, service provider or supplier on the Department's projects until subcontractors, service providers or suppliers are paid.
- C. Department employs other mechanisms, consistent with this part and applicable state and local law, to ensure that DBEs, other Contractors, service providers and suppliers are fully and promptly paid.

1.6 OVERPAYMENT BY ENGINEER

- A. If the Engineer overpays for work or services performed or materials delivered, the Department deducts the dollar amount of the overpayment from future payments to the Contractor.
- B. The subcontractor, service provider or supplier is responsible to keep records and to know the quantity of work or services performed or materials delivered. If overpayment is made to a subcontractor, service provider or material supplier, the subcontractor, service provider or material supplier immediately notifies the Contractor and the Department of the overpayment.
- C. If prompt payment results in overpayment, the subcontractor, service provider or supplier promptly repays the Contractor the amount of the overpayment. If prompt repayment is not made to the Contractor, the prompt payment penalties of this specification applies to subcontractor or supplier.

PART 2 PRODUCTS Not used.

PART 3 EXECUTION Not used.

END OF SECTION

SECTION 01554M

TRAFFIC CONTROL

PART 3 EXECUTION

Add the following paragraphs to Part 3 EXECUTION:

3.7 ROADWAY CLOSURES

- A. North Ogden Canyon Road may be closed for construction. At least 10 days prior to closing the Canyon Road, install "Road Closed Ahead" sign in North Ogden and Liberty, as shown on plan sheet TC1. Install a placard on each sign indicating date of Canyon Road closure. At time of Canyon Road closure, remove placards and install remaining detour signs
- B. Reopen the Canyon Roadway to two paved lanes, with all appropriate safety devices, at least from December 1 through February 29 inclusive, unless ENGINEER approves extension to time of Canyon Road closure. Temporary pavement, etc., and maintenance of temporary pavement is the CONTRACTOR's responsibility. See Section 00555M regarding liquidated damages for failure to reopen the canyon road from December 1 through February 29.

3.8 COORDINATE ROAD CLOSURES WITH ADJACENT PROJECTS

C. Obtain the schedule from the ENGINEER for the Bureau of Reclamation's work related to Pineview Dam. Attempt to have North Ogden Canyon Road open to traffic when access across Pineview Dam is closed.

3.9 PUBLIC INFORMATION MANAGER

- A. Designate the Public Information Manager at the project pre-construction conference.
 - 1. Responsible for project public information services.
 - a. Public Information Manager duties take precedence over other assigned duties.

Traffic Control 01554M - 1 of 2

3.10 PUBLIC INFORMATION MANAGER (PIM) RESPONSIBILITES

- A. Establish a local public information office. Office can be located within the Contractor's regular office provided that the telephone line is a local line.
 - 1. Has established working hours and days.
 - 2. Is equipped with a telephone and answering machine dedicated to project public information services.
- B. Maintains daily communication with the Engineer.
- C. Maintains and documents weekly communications with Region Public Involvement Coordinator, affected residents, businesses, organizations, and public agency (local emergency services, public works, transit authorities, city offices) and other stakeholders.
- D. Maintains availability by telephone.
 - 1. Maximum 24 hours response time during project working hours.
 - 2. On call status required during on non-working hours.
- E. Develop a database of stakeholders and stakeholder contact information (name, address, phone number, email address and fax number).
- F. Establishes method of producing and distributing printed information (fliers).
- G. Be available to organize, participate, and document public and private meetings involving project, when requested by Engineer.

SECTION 01571M

TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 GENERAL

Add the following to paragraph 1.1, SECTION INCLUDES

C. Requirements for minimizing storm water pollution on the construction site.

Add the following to paragraph 1.2, RELATED SECTIONS

- F. Section 01574: Environmental Control Supervisor
- G. Section 02911: Mulch
- H. Section 02231: Site Clearing and Grubbing

Add the following to paragraph 1.4, TYPES

- H. Temporary Bare Soil Stabilization:
 - 1. Protects disturbed or bare soil areas.
- I. Brush Barrier:
 - 1. Intercepts and ponds sediment-laden sheet flow runoff from slopes to prevent material from moving downslope and into undisturbed areas.
 - 2. Reduces water velocity of the incoming flow and allows most of the suspended sediment to settle out.
 - 3. Allows water to percolate through the brush barrier.

PART 2 PRODUCTS

Add the following to paragraph 2.1, MATERIALS

- H. Temporary Bare Soil Stabilization:
 - 1. Straw Mulch: refer to section 02911M.
- I. Brush Barrier:
 - 1. Salvaged woody debris that is free of soil from site excavation.

PART 3 EXECUTION

Delete paragraphs 3.1.A, B, C, D, E and 3.2.A, B, C

Add the following to PART 3, EXECUTION:

3.1 GENERAL

- A. Understand that the erosion control measures on the Storm Water Pollution Prevention Plan (SWPPP) are diagrammatic and must be adapted in the field to meet their intended purpose. As the project progresses through the various construction phases, implement the appropriate erosion control measures for that stage. Make necessary changes to the SWPPP to accommodate construction sequencing.
- B. Obtain written approval from the Engineer to change the SWPPP. Install additional erosion control measures as directed by the Engineer.
- C. The Contractor's Environmental Control Supervisor (ECS) is responsible for implementing the SWPPP as outlined in Section 01574.
- D. Do not start earth disturbing work until the appropriate temporary erosion and sediment control measures are in place.
- E. Apply temporary erosion control measures to disturbed areas beyond the limits of the project including: staging areas, haul roads, borrow sites, stockpiles, and disposal areas. No payment will be made for erosion control measures applied beyond the limits of the project.
- F. Follow installation procedures outlined in the Standard Drawings, in the plan set details, and in the UDOT Temporary Erosion and Sediment Control Manual.

G. Apply temporary bare soil stabilization to disturbed or bare soil areas on which no constant work has been performed for 14 days.

3.2 INSTALLATION

- A. Provide or construct erosion control measures such as check dams, silt fence, slope drains, drop-in inlet barriers, sediment traps, and other erosion control devices or methods to prevent erosion and sedimentation during construction and during shutdown periods.
- B. Inspect earthwork during construction to detect any evidence of the start of erosion. Pro-actively apply corrective measures in a timely manner as required.
- C. Use the most restrictive requirement if a conflict occurs between erosion and sediment control specifications and federal, state, or local agency's laws, rules, or regulations.
- D. Place the brush barrier on the down slope below the fill toe of slope. Stack soil free woody debris so sheet flow runoff is intercepted by the brush barrier. Construct the brush barrier according to the detail in the plans as clearing and grubbing progresses.

3.3 MAINTENANCE

- A. After each storm, remove deposited sediment, and make any necessary repairs or corrections to the erosion control device.
- B. Maintain erosion control devises so they perform their intended function through all construction phases.

SECTION 01721M

SURVEY

PART 3 EXECUTION

Revise the following paragraph to 3.3 COMPUTATION AND PLOTS;

3.3 COMPUTATIONS AND PLOTS

A. Delete "When work is modified by change order,"

Add the following paragraph to PART 3 EXECUTION:

3.14 AS BUILT RIGHT OF WAY SURVEY AND RIGHT OF WAY DESCRIPTION

- A. Upon substantial completion of the project perform a survey of final required right of way.
- B. Develop final right of way description.
- C. Provide final right of way description to the Engineer for forwarding to the United States Forest Service.

Survey 01721M - 1 of 1

SECTION 02319S

ROCK BLASTING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Perform blasting to the limits, lines, and grades shown on the plans or as established in the field by the Engineer.

1.2 **DEFINITIONS**

- A. Rock Blasting Drilling and blasting for pre-splitting, rock excavation or cushioning (trimming).
- B. Pre-splitting Controlled blasting for the construction of a smooth plane in rock cuts. Pre-splitting causes a continuous or semicontinuous fracture between drill holes. Produce stable rock cuts and minimize overbreak in the backslope. Detonate pre-splitting holes before detonation of any production holes.
- C. Rock Excavation Blasting The main fragmentation blasting resulting from more widely spaced production holes drilled throughout the main excavation area adjacent to the controlled blast line. Detonated in a controlled delay sequence.
- D. Cushion (Trim) Blasting Controlled blasting along the cut face performed after the detonation of the production holes.
- E. Controlled Blasting Controlled blasting is defined as excavation of rock in which the various elements of the blast, including hole size, depth, spacing, burden, charge size, distribution, and delay sequence, are carefully balanced and controlled to provide a distribution of charge that will excavate the rock to the required limits with smooth surfaces. Controlled blasting minimizes overbreak, stressing, and fracturing of the ground beyond the design lines. Smooth-wall

Rock Blasting 02319S - 1 of 7

blasting, pre-splitting, cushion blasting, and line drilling are examples of operations included in the term controlled blasting.

PART 2 PRODUCTS

2.1 EXPLOSIVES

- A. Controlled Use only standard explosives manufactured especially for controlled blasting (pre-splitting or cushion). Bulk loading not allowed.
- B. Production In accordance with the blasting plan. Bulk loading allowed.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

- A. Perform blasting operations and store and handle explosives and blasting agents in accordance with the contract provisions and all Federal, State, and local regulations.
- B. The ENGINEER will suspend blasting operations if the specified slopes are not maintained in a stable condition; or nearby residences, structures, utilities, or appurtenances are endangered; or the safety and convenience of the traveling public is jeopardized due to excessive fly rock, fragmentation, vibration, air blast, or overbreak.

3.2 BLASTING PLAN

- A. Submit a blasting plan to the ENGINEER at least 2 weeks prior to commencing operations. Submit proposed changes to the blasting plan to allow at least 3 working days for review. Submit the blasting plan using forms approved by the ENGINEER.
 - 1. Station limits of proposed blast.
 - 2. Plan and section views of proposed drill pattern including free face, burden and blast-hole spacing distance, hole diameters, hole angles, lift height, and depth of subdrilling and stemming.
 - 3. Loading diagrams showing type and quantity of explosives, primers, initiators, delay sequence and timing, and powder factor.

Rock Blasting 02319S - 2 of 7

- 4. Manufacturer's data sheet for all explosives, primers, and initiators to be employed.
- B. The submittal of the blasting plan to the ENGINEER for review shall not absolve the CONTRACTOR of the responsibility for using proper drilling and blasting procedures and for obtaining specified results. Revise the blasting plan if specified results are not obtained.
- C. When the contract requires the CONTRACTOR to retain a blasting consultant to assist with the blast design, submit blasting plans approved by the blasting consultant.

3.3 HOLES FOR CONTROLLED BLASTING

- A. Provide drilling equipment with devices to accurately determine the angle the drill steel enters the rock. Drilling will not be permitted if the devices are inoperative.
- B. Control drilling operations to ensure that no hole deviates from the plan of the planned slope by more than 6 inches parallel or normal to the slope.
- C. Drill holes for controlled blasting within 3 inches of the staked collar location. Holes drilled outside the 3 inch tolerance shall be refilled with drill cuttings or stemming material and redrilled. Survey and stake the collar location of controlled blast holes for line and elevation.
- D. Drilling to 2 feet below ditch bottom will be allowed to facilitate removal of the toe berm.
- E. Extend controlled blast holes a minimum of 30 feet beyond the limits of the production holes to be detonated, or to the end of the cut as applicable.
- F. Drill controlled blast holes for individual lifts to a depth not exceeding 30 feet.
- G. The ENGINEER may order discontinuance of the pre-splitting method if the materials encountered are unsuitable for being pre-split.

3.4 BLASTING TEST SECTION

A. Prior to commencing controlled blasting operations, drill, blast, and excavate test sections, up to 100 feet in length, to determine if the blasting plan produces specified results.

Rock Blasting 02319S - 3 of 7

- B. Prior to commencing the blast test section, investigate the test site. To prohibit overbreak, submit a blast plan considering the geologic structure of the rock; the location and direction of the jointing system, the strike and dip of the bedding planes, and mud, shale or other soft seams that may cause unacceptable blast results.
- C. Begin the test section with the controlled blast holes spaced 30 inches apart and make adjustments to attain the specified cut face results.
- D. Do not begin production drilling until the test section has been excavated and the results evaluated by the ENGINEER. The ENGINEER shall have 24 hours to evaluate the excavated test section. If the test section is unacceptable, provide the ENGINEER with a revised blasting plan and a second test section shall be excavated in accordance with the revised plan. Submit a revised blasting plan considering revised controlled blast hold spacing, burden and production spacing, bench height, drill pattern, hole diameter, delay, and any other parameters that may cause unacceptable blast results.
- E. If the second test section is determined to be unacceptable, obtain the services of a blasting consultant as specified in Subsection 3.11.
- F. Unacceptable test blast results include overbreakage beyond the lines and grade, flyrock, or violation of other requirements within these specifications.
- G. All costs incurred by the CONTRACTOR necessary to produce an acceptable test shot shall be considered incidental to the contract unit price for rock blasting.

3.5 PRE-SPLIT BLASTING

- A. Before placing charges, assure the hole is free of obstructions for its entire depth and place the charge without causing material to cave in from the walls of the holes.
- B. Drill hole conditions may vary from dry to filled with water. The type or types of explosives and blasting accessories necessary to accomplish the specified results shall be compatible to the conditions encountered.
- C. Use explosives of a diameter not exceeding one-half the diameter of the pre-split hole. Use only standard explosives manufactured specifically for pre-splitting.
- D. Affix fractional portions of standard explosive cartridges so that the cartridges will not slip down the detonating cord or bridge the hole.

Rock Blasting 02319S - 4 of 7

- E. Assemble and affix continuous column cartridge type explosives to the detonating cord in accordance with the explosive manufacturer's instructions. Submit a copy of the manufacturer's instructions to the ENGINEER before blasting.
- F. The bottom charge of a pre-split hole may be larger than the line charges provided it does not cause overbreak. Use a top charge that sufficiently reduces power and is places far enough below the collar to avoid overbreaking and heaving.
- G. Stem pre-split holes below the collar with sand or other dry, angular material passing a 3/8-inch sieve to the stemming distance provided in the blasting plan.
- H. If specified pre-split slopes are obtained, the slope face may be pre-split before production drilling and blasting, or pre-splitting and production blasting may be preformed at the same time, provided pre-splitting holes are fired simultaneously at least 100 milliseconds before the production blast.
- I. To reduce ground vibrations or noise, delay the blasting of pre-split holes provided the hole-to-hole delay is not greater than 25 milliseconds.
- J. Provide a pre-split slope face not deviating in excess of 6 inches, measures perpendicular to the plan of the slope, from a plane passing through adjacent drill holes, unless the ENGINEER determines the rock characteristics produce unavoidable irregularities exceeding this tolerance.

3.6 CUSHION (TRIM) BLASTING

- A. Where the horizontal distance from the pre-split face to the existing rock face is less than 15 feet, cushion blasting may be used in lieu of pre-splitting.
- B. Preform detonation along the pre-split face after the detonation of all production holes.
- C. Use a delay time between the trim line (pre-split face0 and the nearest production row not greater than 75 milliseconds nor less than 25 milliseconds.
- D. With the exception of requirements specified in Subsections 3.6.A, 3.6.B and 3.6.C, requirements given for pre-split apply.

3.7 PRODUCTION BLASTING

- A. Drill the row of production blast holes immediately adjacent to the pre-split blast line on a plane parallel to the controlled blast hole line.
- B. Determine the production hole diameter.
- C. Stem the production holes with sand or other dry, granular material passing a 3/8/inch sieve.
- D. Take necessary precautions in production blasting to prevent damage to the rock backslope.
- E. Delay detonation of production holes on a sequence toward a free face.

3.8 SAFETY

- A. Inspect the entire area following a blast and remove any unstable rock and determine if there is unexploded powder and other dangerous situation.
- B. Determine that the site is safe before resuming work or opening the roadway to traffic.

3.9 SCALING

- A. Remove or stabilize all rock that is loose, hanging, or which creates a potentially dangerous situation during the excavation of each lift.
- B. Drilling the next lift will not be allowed until scaling has been completed.
- C. Scale the slopes throughout the span of the contract at frequency required to remove all hazardous loose rock or overhangs.
- D. Methods such as machine scaling, hydraulic splitters, or light blasting may be used in lieu of or to supplement hand scaling.
- E. Scaling is incidental to the contract unit price for rock blasting.

3.10 OPEN-CUT GROUND REINFORCEMENT

A. If open-cut ground reinforcement is required use rock bolting or other ENGINEER approved stabilization techniques.

Rock Blasting 02319S - 6 of 7

B. Preform open-cut ground reinforcement resulting from carelessness or failure to follow the blasting plan, at no cost to the DEPARTMENT.

3.11 BLASTING CONSULTANT

- A. If the second test section is determined to be unacceptable as specified in subsection 3.4 E, provide a consultant that is a recognized expert in the field of drilling and blasting who's primary source of income is providing specialized blasting or blasting consulting services.
- B. Use a consultant that is not an employee of the CONTRACTOR, explosives manufacturer, or explosives distributor.
- C. Submit a resume of the credentials of the proposed consultant with the blasting plan. Include in the resume all projects the consultant has consulted on within the last twenty-four months.
- D. Provide a blasting consultant approved by the ENGINEER prior to beginning drilling and blasting work.

SECTION 02610M

PIPE CULVERTS

Add the following to Part 1:

1.4 ACCEPTANCE CRITERIA

A. Pipe culverts accepted according to the criteria outlined in this section. The Engineer may require testing of any or all culverts for compliance with the criteria. The Engineer reviews and approves proposed corrections. The acceptance of pipe culvert is based on five requirements: 1) Horizontal and vertical alignment deviations; 2) Barrel distortions; 3) Damages to the pipe; 4) Joint fitting; 5) Coating integrity. Following is a description of the requirements:

1. Horizontal and vertical alignment deviations

Measure horizontal and vertical installation deviations from the culvert's final construction survey stakes. Do not exceed the tolerances shown on Table A of this section.

2. Barrel distortions

Measure load distortions along a straight line through the centerline of the pipe. Do not exceed the tolerances shown on Table A of this section.

3. **Damaged culverts**

Remove or repair pipe culverts that are irregular or distorted, have cracks, dents, holes, splits, or loose nuts or bolts. Remove all pipes with a damaged invert.

4. **Joints**

Remove all pipe culverts that have damaged joints that allow the culvert to leak. Re-install or remove all pipes that do not connect properly. Connect joints according to manufacturers recommendations. Provide a manufacturer Certificate of Compliance for the pipe joints.

5. Coating integrity

Repair all pipe coatings, according to manufacturer recommendations, that don't have the required thickness or that have been damaged. Provide a Manufacturer Certificate of compliance for the pipe coating.

Pipe Culvert 02610M - 1 of 2

Table	- A	TOLER	ANCES
1 and	- 1	IOLLIN	$\Delta UUUU$

Alignment Tolerances		Distortions Gradual Ovaling or Elliptical		
Design Grade	Max. Line Deviation	Max. Grade Deviation	Nominal Pipe Diameter *	Maximum Distortions **
	Percent of	inch/100feet	inch	Inch
	Nominal Pipe			
	Diameter			
> 1 %	5	1 1/2	18	+/- 0 - 7/8
			24	+/- 1 - 1/4
≤ 1 %	5	1	30	+/- 1 - 1/2
			36	+/- 1 - 7/8
< 0.5 %		± 0.5	42	+/- 2
			48 +/-	+/- 2 - 3/8

Notes

For nominal culvert diameters larger than 48 inch, use measured diameter to calculate 5 percent allowable distortion. *

Maximum distortions are used to define dimensions associated with allowable pipe deflections. Measure directly or by use of a mandrel test. **

SECTION 02612S

PIPE ANCHOR ASSEMBLY

PART 1 GENERAL

1.1 SECTION INCLUDES:

A. Assembling pipe anchors as shown in the details at the lacations specified in the plans.

1.2 RELATED SECTIONS

- A. Section 2610 Pipe Culverts
- PART 2 PRODUCTS Not Used
- PART 3 EXECUTION

3.1 INSTALLATION

A. Construct pipe anchor assemblies as called for on the plans and as shown in the details.

END OF SECTION

Pipe Anchor Assembly 02612S - 1 of 1

SECTION 02615S

WALL DRAINAGE ASSEMBLY

PART 1 GENERAL



1.1 SECTION INCLUDES

A. Furnish all necessary materials and labor, including catch basin, pipe, grate and frame, and manhole steps to install wall drainage assemblies according to details shown on the plans.

1.2 RELATED SECTIONS

A. Section 2610 - Pipe Culverts

PART 2 PRODUCTS

- A. Standard UDOT cast-in-place catch basins with varying depths.
- B. Corrugated metal pipe per section 2610.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install wall drainage assemblies as shown on the plans.

END OF SECTION

Wall Drainage Assembly 02615S - 1 of 1

SECTION 02742S

PROJECT SPECIFIC SURFACING REQUIREMENTS

Add this Section to the Standard Specifications.

PART 1 GENERAL

- 1.1 SECTION INCLUDES
 - A. Required PG Asphalt or emulsion.
 - B. Number of gyrations to use for Superpave Mix Design

PART 2 PRODUCTS

2.1 Mixes

- A. Hot Mix Asphalt (HMA): ³/₄ inch
 - 1. PG 64-34 Asphalt
 - 2. $N_{\text{initial}}=7$; $N_{\text{design}}=75$; $N_{\text{max}}=115$
 - 3. The number of gyrations used for the mix design may be amended to allow the use of a previous approved mix design with the approval of the Region Material Engineer.

PART 3 EXECUTION

Not used.

SECTION 02765S

PAVEMENT MARKING PAINT

Delete Section 02765 and replace with the following:

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Furnish Acrylic Water Based pavement marking paint meeting Federal Specification TTP-1952 D. And refer to 2.1 for resin requirement.
- B. Apply to asphaltic or concrete pavement as edge lines, center lines, broken lines, guide lines, symbols and other related markings.
- C. Remove pavement markings.

1.2 REFERENCES

- A. AASHTO M 247: Glass Beads Used in Traffic Paint.
- B. ASTM D 562: Consistency of Paints Measuring Krebs Unit (KU) Viscosity Using the Stormer-Type Viscometer.
- C. ASTM D 711: No-Pick-Up Time of Traffic Paint.
- D. ASTM D 2205: Selection of Tests for Traffic Paints
- E. ASTM D 2743: Uniformity of Traffic Paint Vehicle Solids by Spectroscopy and Gas Chromatography.
- F. ASTM D 3723: Pigment Content of Water-Emulsion Paints
- G. ASTM D 3960: Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings.
- H. ASTM D 4451: Pigment Content of Paints

- I. ASTM D 5381: X-Ray Fluorescence (XRF) Spectroscopy of Pigments and Extenders.
- J. Federal Standards 595B, 37875, 33538, 11105 and TTP-1952 D.

1.3 ACCEPTANCE

A. UDOT ENGINEER:

- 1. Randomly samples pavement marking paint and submits to Central Chemistry Lab for acceptance.
- 2. Randomly generates the location of each test and removes all loose or excess beads from the line prior to testing.
- 3. Visually inspects each line to verify bead adhesion and compliance with specified line dimensions requirements.
- 4. Verifies that the paint and beads are being applied within specified tolerances a minimum of once each production day.
- 5. Verify quantities used by measuring both paint and bead tanks prior to and after application.
- B. Repaint any line or symbol failing to meet bead adherence and dimensional requirements.
- C. Repaint any line or symbol failing to meet the minimum application requirements for paint or beads.

PART 2 PRODUCTS

2.1 PAINT

A. Choose an approved pavement marking paint from the UDOT Research Division "Accepted Products Listing." Follow Federal Standards 595B, 37875, 33538, and 11105. Meet the following requirements for Acrylic Water Based Paint:

CIELAB (L*a*b*) D65/10E				
White	Yellow	Red		
L* 91.9 to 95.6	L* 70.0 to 72.7	L* 31.4 to 33.4		
a* -1.8 to -2.1	a* 22.5 to 24.8	a* 51.6 to 52.6		
b* 3.8 to 2.2	b* 89.7 to 73.9	b* 34.1 to 35.1		

1. No-track time: Not more than 5 minutes when tested according to ASTM D 711.

- 2. Volatile Organic Compounds Content: Less than 1.25 lbs/gal ASTM D 3960.
- 3. Free of lead, chromium, or other related heavy metals ASTM D 5381.
- 4. Pigment: Percent by weight: Acrylic Water Based minimum of 62.0 ± 2.0 ASTM D 3723.
- 5. Total Solids: Percent by weight: Acrylic Water Based minimum of 77.0 ASTM D 2205.
- 6. Acrylic water based paint must contain a minimum of 40 percent, by weight, 100 percent acrylic cross-linkable emulsion as determined by infrared analysis and other chemical analysis available to UDOT. ASTM D 2205
- 7. ASTM D 562, ASTM D 2743, ASTM D 4451 and ASTM D 5381: Tests used to verify paint samples meet "Accepted Products Listing".

2.2 GLASS SPHERE (BEADS) USED IN PAVEMENT MARKING PAINT

- A. Specific Properties:
 - 1. Meet AASHTO M 247.
 - 2. Meet type II, uniform gradation.

PART 3 EXECUTION

3.1 PREPARATION

- A. Line Control.
 - 1. Establish control points at 100 ft intervals on tangent and at 50 ft intervals on curves.
 - 2. Maintain the line within 2 inches of the established control points and mark the roadway between control points as needed.
 - a. Remove paint that is not placed within tolerance of the established control points and replace at no expense to the Department. Refer to article 3.4.
- B. Remove dirt, loose aggregate and other foreign material and follow manufacturer's recommendations for surface preparation.

3.2 APPLICATION

- A. Pavement Marking Paint: Apply at the following rates:
 - 1. 4 inch Solid Line: From 270 to 350 ft/gal
 - 2. 4 inch Broken Line: From 1080 to 1400 ft/gal
 - 3. 8 inch Solid Line: From 135 to 175 ft/gal

- B. Replace pavement markings that are less than 14 wet mils in thickness.
- C. No payment for pavement markings placed in excess of 18 wet mils in thickness.
- D. Painted Legends and Symbols 1 gallon per 100 square feet.
- E. Glass Sphere (Beads): Apply a minimum of 8 lbs/gal of paint, the full length and width of line and pavement markings.
- F. Begin striping operations no later than 24 hours after ordered by the Engineer.
- G. At time of application apply lines and pavement markings only when the air and pavement temperature are:
 - 1. 50 degrees F and rising for Acrylic Water Based Paint.

3.3 CONTRACTOR QUALITY CONTROL

A. Application Rate: Verify that the paint and beads are being applied within specified tolerances prior to striping.

3.4 REMOVE PAVEMENT MARKINGS

- A. Use one of these removal methods:
 - 1. Grinding
 - 2. High pressure water spray
 - 3. Sand blasting
 - 4. Shot blasting.
- B. Use equipment specifically designed for removal of pavement marking material.

SECTION 02771M

CURBS, GUTTERS, DRIVEWAYS, PEDESTRIAN ACCESS RAMPS, AND PLOWABLE END SECTIONS

PART 1 GENERAL

Add the following paragraph to section 1.1 SECTION INCLUDES:

B. Materials and procedures for concrete ditch.

PART 2 PRODUCTS - not used

PART 3 EXECUTION

Add the following paragraph to PART 3 EXECUTION:

3.6 CONCRETE DITCH

A. Construct concrete ditch according to the details shown and at the locations indicated on the plans.

SECTION 02821M

CHAIN LINK FENCING AND GATES

PART 1 GENERAL

Add the following paragraph to 1.1 SECTION INCLUDES:

B. Materials and procedures for reinstalling chain link fence and gates.

PART 2 PRODUCTS - Not Used.

PART 3 EXECUTION

Add the following paragraph to PART 3 EXECUTION:

3.4 REINSTALL FENCE

A. Reinstall chain link fence as called for on the plans. Replace broken or damaged parts with the same quality or better materials. Purchase additional posts, fence and/or parts with the same quality or better as needed to complete reinstallation of fence as shown on the plans. Reinstall gates at the same location or as directed by the ENGINEER.

SECTION 02831S

RETAINING WALL – ALTERNATE SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. The plans include situation, layout drawings, and details for post and panel walls. The Contractor may elect instead to select from the following wall systems, to be used for retaining walls indicated as a Contractor-selected alternative system on the project.
 - 1. MSE Wall Reinforced Earth (refer to Section 02833S)
 - 2. MSE Wall Foster Geotechnical (VSL) (refer to Section 02833S)
 - 3. MSE Wall SSL MSE *Plus* Retaining Wall (refer to Section 02833S)
 - 4. MSE Wall ARES Geogrid Retaining Wall (refer to Section 02834S)
 - 5. MSE Wall KeySystemI Retaining Wall (refer to Section 02835S)
 - 6. MSE Wall Genesis Geogrid Retaining Wall (refer to Section 02836S)
 - 7. MSE Wall MESA Retaining Wall (refer to Section 02836S)
 - 8. MSE Wall Two Stage (refer to Section 02837S)
- B. Notify the Department in writing; on or before the preconstruction conference, which option will be used at each location. Selection must be made only from the options listed in paragraph 1.1.A, above.
- C. Only one MSE wall system will be allowed for the Contractor-selected alternative system.
- D. No changes to the wall types will be allowed following the preconstruction conference, other than by the value engineering process.
- E. Design, Drawings, and Submittal Requirements for selected MSE Wall alternative system:
 - 1. Design Requirements The following design requirements are applicable for all MSE wall options.

- a. Current AASHTO Specifications and Interim Specifications for Highway Bridges as modified by the following:
 - 1. For all walls located within 50 feet of bridge abutments, use a design earthquake peak horizontal ground acceleration coefficient corresponding to a 10% exceedence in 250 years. For all other walls, use an acceleration coefficient corresponding to a 10% exceedence in 50 years.
 - 2. The Contractor-selected Wall Company is responsible for all stability calculations, except global stability and bearing capacity.
 - 3. Minimum service life of 75 years.
 - 4. Department special provision Sections 02832S through 02837S as appropriate for the selected wall system.
 - 5. Provide corrosion protection by sacrificial steel sufficient for a corrosion rate of 0.5 mils/year per exposed surface after 16 years of corrosion protection service allowed for the galvanized coating.
 - 6. In accordance with Section 5.8 of the AASHTO bridge design manual (AASHTO, 1996), horizontal benches a minimum of 4 feet in width, shall be provided at the base of walls to be founded on earth slopes. However, no benches shall be provided for walls located adjacent to concrete slope-protected slopes.
 - 7. Use the following soil design properties:

SOIL	WALL	RETAINED	FOUNDATION
PROPERTIES	BACKFILL	SOIL	SOIL
Moist Density (pcf)	*	130	130
Friction Angle (deg)	*	34	35
Cohesion (psf)	*	0	50
		AASHTO	
	AASHTO LOAD	LOAD GROUP	
	GROUP 1	II	
Foundation Soil			
Allowable Bearing			
Capacity (psf)	4500	4500	

2. Submittal Requirements and Review

Prepare and submit construction shop drawings addressing the following design items to the Engineer, sufficient for construction of the walls including all necessary plans, profiles, cross sections, quantities, and

details. The shop drawings shall be prepared and signed by the licensed professional engineer.

- a. Cast-in-place concrete coping/cap to the facing panels/blocks to be aesthetically pleasing, and to adequately support any fence and/or barrier.
- b. Provisions for facilities, which penetrate the wall face or soil reinforcing elements (such as but not limited to drainage catch basins, piping, foundation elements, guard-rail posts, and other buried facilities).
- c. Surface and subsurface drainage details including end treatment details sufficient for protection of the wall system from erosion and excessive hydrostatic loading. Surface drainage at the ends of the walls shall be directed to drainage catch basins. Provide design details for the drainage to the catch basins.
- d. Design calculations sufficient for review to determine that the walls have been designed in accordance with the required criteria. The design calculation shall be prepared and signed by a registered professional engineer.
- 3. The Engineer will require 6 weeks after the date received for review of submittals. Written acceptance of MSE wall submittals will be provided by the Engineer. Construction of the wall shall not begin until written acceptance has been provided. If the Engineer determines that MSE wall submittals are not sufficient, re-submittals will be required and the Engineer will require 3 weeks after the date received for review of the resubmittals.

1.2 RELATED WORK

- A. UDOT Standard Drawings: Concrete Retaining Walls.
- B. Section 02832S: Select Material for MSE Walls.
- C. Section 02833S: MSE Walls Using Concrete Facing Panels and Metal Reinforcing Elements.
- D. Section 02834S: MSE Walls Using Concrete Facing Panels and Geogrid Reinforcing Elements.
- E. Section 02835S: MSE Walls Using Modular Block Units and Metal Reinforcing Elements.
- F. Section 02836S: MSE Walls Using Modular Blocks and Geogrid Reinforcing Elements.

G. Section 02837S: Two-Stage MSE Walls Using Concrete Facing Panels and Metal Reinforcing Elements.

PART 2 PRODUCTS

2.1 MATERIALS

A. All materials are as required in Sections 02832S through 02837S as appropriate for the selected wall system.

PART 3 EXECUTION

3.1 INSTALLATION

A. All installation is as required in Section 02832S through 02837S as appropriate for the selected wall system.

SECTION 02832S

SELECT MATERIAL FOR MSE WALLS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Select Material or MSE walls and placement procedures.

1.3 RELATED SECTIONS

- A. Section 02324: Compaction.
- B. Section 02831S: Retaining Wall Alternate Systems.
- C. Section 02833S: MSE Walls Using Concrete Facing Panels and Metal Reinforcing Elements.
- D. Section 02834S: MSE Walls Using Concrete Facing Panels and Geogrid Reinforcing Elements.
- E. Section 02835S: MSE Walls Using Modular Block Units and Metal Reinforcing Elements.
- F. Section 02836S: MSE Walls Using Modular Block Units and Geogrid Reinforcing Elements.
- G. Section 02837S: Two-Stage MSE Walls Using Concrete Facing Panels and Metal Reinforcing Elements.

1.4 **DEFINITIONS**

A. Select Material for MSE Walls: Fill material meeting requirements of this Section.

1.5 QUALITY ASSURANCE

A. Remove products found defective after installation and install acceptable products at no additional cost to the Department.

PART 2 PRODUCTS

2.2 SELECT MATERIAL FOR MSE WALLS

A. Select Material used for MSE wall backfill shall be free from frozen, organic and otherwise deleterious materials and shall conform to the following gradation limits as determined by AASHTO T-27:

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Gradation for			
Select Material for MSE Walls			
Sieve Size	Percent Passing		
4 inch*	100		
No. 40	0 – 60		
No 200	0 – 15		

- B. The Plasticity Index (PI), as determined by AASHTO T-90 shall not exceed 6.
- C. The material shall exhibit an internal friction angle of not less than 34 degrees as determined by the standard direct shear test, AASHTO T-236, utilizing a sample of the material compacted to 95 percent of AASHTO T-99, Methods C or D (with oversize correction, as outlined in Note 7), at optimum moisture content. Internal friction angle testing is not required for backfill materials that have at least 80 percent of the material greater than or equal to the ¾ inch size.
- D. The material shall be substantially free of shale or other soft, poor durability particles. The material shall have a sodium sulfate soundness loss of less than 15 percent after 5 cycles, determined in accordance with AASHTO T-104.
- E. The material shall conform to the following electrochemical requirements.

Table 2

Electrochemical Requirements			
Property	Requirement	Test Method	
Resistivity	Minimum 3000 ohm-cm, at 100% saturation	AASHTO T-288	
РН	Acceptable Range: 5-10	AASHTO T-289	
Chlorides	Maximum 100 ppm	AASHTO T-291	
Sulfates	Maximum 200 ppm		
		AASHTO	
		T-290	

- F. Furnished the IQF with a Certificate of Compliance certifying that the select material complies with this section of the specifications. This certificate must be made by an AASHTO-certified testing lab.
- H. Furnished the IQF with a copy of all test results performed by the Design-Builder, which are necessary to assure compliance.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Excavation and Foundation Preparation:
 - 1. Excavate and grade foundation area to the lines and grades shown on the drawings, or as directed by the Engineer.
 - 2. The width of excavation shall be equal to or exceeding the length of soil reinforcing elements.
 - 3. Prior to the wall construction, compact the foundation using a minimum of 3 passes of a lightweight, steel, smooth-drum vibratory roller, or as otherwise determined by the Engineer.
 - 4. All foundation soils found to be unsuitable shall be removed and replaced with Select Material, placed and compacted as described in this Section, or with other suitable material determined by the Engineer.

B. MSE Wall:

1. Placement of Select Material for MSE wall backfill shall follow erection of each course of panels. Backfill at the front of the wall shall be

- completed prior to backfilling more than 4 feet above the bottom of the lowermost facing element.
- 2. Place backfill in such a manner as to avoid any damage or disturbance to the wall materials of misalignment of the facing panels.
- 3. Wall materials, which become damaged or disturbed during backfill placement shall be wither removed and replaced, or corrected as directed by the Engineer, at the Contractor's sole expense.
- 4. Backfill placed which does not meet the requirements of this specification shall be removed and replaced, or otherwise corrected as directed by the Engineer, at the Contactor's sole expense.
- 5. The moisture content of the backfill prior to and during compaction shall be uniform throughout each layer.
- 6. The optimum moisture content will be determined in accordance with AASHTO, Method C or D (with oversize correction, as outlined in Note 7 of T-99).
- 7. Backfill moisture content at placement shall not be greater than the optimum moisture content, or less than 4 percentage points below optimum.
- 8. Backfill with placement moisture content in excess of the optimum moisture content shall be removed. The wet Select Material backfill may be reused, provided it is aerated or otherwise reworked until the moisture content is uniform and acceptable throughout the entire lift.
- 9. When placing backfill over the soil reinforcement, begin placement 6 to 10 feet from the wall face and proceed away from the wall.
- 10. Maximum lift thickness shall not exceed 10 inches (loose). Decrease the lift thickness as necessary to obtain the specified density.
- 11. Compact backfill to at least 95 percent of maximum density, Method C or D (with oversized correction. Outlined in Note 7 of T-99).
- 12. If 30 percent or more of the Select Material is greater than ³/₄ in size, AASHTO T-99 is not applicable. For such a material, the acceptable criterion for control of compaction shall be either a minimum of 70 percent relative density of the material as determined by a method specification (based on a test compaction section, which defines the type of equipment, lift thickness, number of passes of the specified equipment, and placement moisture content).
- 13. Each layer of backfill shall be placed and compacted in a level manner before placing subsequent backfill layers.
- 14. Do not use sheeps-foot or other grid-type rollers for compacting material within the limits of the soil reinforcement.
- 15. Prior to placement of the reinforcement, the backfill elevation, after compaction, shall be 2 inches above the reinforcement connection from a point approximately 1 foot behind the back face of the wall facings (panels, block units, etc.) to the end of the reinforcing, unless otherwise shown on the plans.

- 16. Compaction within 3 feet of the back face of the wall facing units and within 2 feet of any obstructions, shall be achieved by at least three passes of a suitable lightweight (hand-held or hand-guided) mechanical tamper, roller, or vibratory compactor. The maximum loose lift thickness within this zone shall be between 6 inches and 8 inches, as warranted by the type of compaction equipment actually used; but no soil density tests need be taken within this area. Exercise care in the compaction process to avoid misalignment of the panels.
- 17. Rubber-tired equipment may pass over the reinforcement at slow speeds (less than 5 mph). Avoid sudden braking and sharp turning.
- 18. Soil reinforcing elements shall be placed normal to face of wall in plan view; or may be skewed, minimizing the skew angle to avoid obstructions, but no more than 25 degrees unless approved by the wall company.
- 19. The top level of soil reinforcement shall be placed parallel to the top of the facing unit a distance below the top of the wall as shown on the plans. The top level of soil reinforcement shall also be placed a minimum of 3 inches below the bottom of the barrier slab lip or the bottom of the concrete gutter behind coping.
- 20. At the end of each day's operation, slope the backfill away from the wall to direct runoff of rainwater away form the wall face. Do not allow surface runoff from adjacent areas to enter the wall construction site.
- 21. Slope the top of the backfill along the wall such that the top reinforcement layer is covered with a minimum of 16 inches of Select Material.

SECTION 02833S

MSE WALLS USING CONCRETE FACING PANELS AND METAL REINFORCING ELEMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Furnish material and construct mechanically stabilized earth (MSE) walls using a Department approved wall system employing metal reinforcing elements.
- B. Make arrangements to purchase the face panels, reinforcing steel, tie strips, fasteners, joint filler, and all necessary attachments from the selected Wall Company.

1.6 RELATED SECTIONS

- A. Section 02831S: Retaining Wall Alternate Systems
- B. Section 02832S: Select Material for MSE Walls
- C. Section 03055: Portland Cement Concrete
- D. Section 03211: Reinforcing Steel and Welded Wire
- E. Section 03310: Structural Concrete

1.7 SUBMITTALS

- A. Submit sample of the texture for approval by the Engineer.
- B. Provide verification that special design of the upper 10 feet of wall has been completed at locations where the design earthquake peak horizontal ground acceleration coefficient is 0.30g or greater.

- C. Provide design details, which protect the reinforcement connections from corrosion due to salt.
- D. Provide all other submittals required in Section 02831S.
- E. Do not start work on any wall until working drawings have been reviewed by the Engineer. The Engineer's review of the Contractor's drawings does not relieve the Contractor of any responsibility under the contract for the successful completion of the work.

PART 2 PRODUCTS

2.3 PRECAST CONCRETE WALL PANELS

- A. Concrete. Class AA(AE) per Section 03055 and Section 03310, having f'c (at 28 days) of at least 4000 psi.
- B. Uniformity. The architectural treatment for all MSE panel walls shall be consistent throughout the project and shall match all other structural elements incorporated in the project.
- C. Reinforcing steel shall have a minimum cover of 2.0 inches.
- D. Casting. Cast panels on a flat area or approved architectural treatment, with the front face down. Tie strip guides shall be set at back face. The concrete in each unit shall be placed without interruption. Vibration shall be done with approved equipment, such that the concrete is forced into corners of the forms to prevent stone pockets or cleavage planes. Use clean form oil.
- E. Curing. Use membrane-curing compound method
- 1. Keep surfaces wet and moist until the curing compound is applied.
- 2. Complete all patching or surface finishing before applying compound.
 - 3. Spray the entire surface of the concrete with a membrane curing compound. Apply the compound at a uniform rate of 11 oz/yd² of area.
 - 4. Immediately re-spray any membrane damage which occurs during the curing period.
 - 5. Removal of Forms. Leave forms in place until they can be removed without damage to the unit.

F Concrete Finish

1. Front face of panels for wall shall have a Class 1 finish. Thickness of architectural treatment shall be in addition to required design thickness of wall.

2. The back face of panels shall have a uniform surface finish. It shall be roughly screened to eliminate open pockets of aggregate and surface distortion in excess of ½ inch.

G. Tolerances

- 1. All dimensions \pm 3/16 inch.
- 2. Angular distortion with regard to the height of panel not to exceed 3/16 inch in 5 feet.
- 3. Surface defects on form surfaces not more than 1/8 inch in 5 feet.
- H. Rejection. Panels will be subject to rejection if:
 - 1. They do not meet the above-mentioned requirements.
 - 2. They contain defects due to imperfect molding.
 - 3. They have any honeycomb.
 - 4. They have open texture on front face.
- I. Marking. Mark the date of manufacture on the rear side of each panel.

2.4 REINFORCING STEEL

- A. Epoxy coated 20 mils thick and conforming to Section 03211.
- B. All reinforcing steel shall be the specified size and free from any defects.

2.3 LEVELING PAD CONCRETE

A. Use Class A or Class B concrete per Section 03055.

2.4 REINFORCING STRIPS

- A. Hot rolled from steel bars, galvanize coated 3.4 mils thick, meeting minimum requirements of ASTM D1784, Grade 65, and AASHTO M-111 (ASTM A-123).
- B. All reinforcing strips shall be the specified size (See 02831S, 1.1E1) and free from defects.

2.5 REINFORCED WELDED WIRE MESH AND LOOP INBEDS

A. Meeting minimum requirements of AASHTO M-32 and AASHTO M-55, and be galvanize coated 3.4 mils thick as per AASHTO M-111 (ASTM A-123).

2.6 TIE STRIPS

- A. Shop fabricated, hot rolled steel conforming to minimum requirements of ASTM A-709M, Grade 345, ASTM A-123, and ASTM A-570, Grade 345 or equivalent, and be galvanize coated 3.4 mils thick in accordance with AASHTO M-111 (ASTM A-123).
- B. All tie strips shall be the specified size and free from any defects.

2.7 PANEL FASTENERS

A. Bolts and nuts shall be hexagonal cap screw and galvanize coated, meeting minimum requirements of ASTM A-325 and ASTM A-153.

2.8 OTHER FASTENERS

A. Fasteners to wingwalls and abutment walls, if required, shall be provided by the Wall Company.

2.9 DAMAGED GALVANIZATION

A. As an alternative to replacement, any reinforcing steel, reinforcing strips, wire mesh or fasteners that has damaged galvanization, spray with zinc paint covering the entire area that has been damaged.

2.10 CURING COMPOUND

A. AASHTO M-148 Type 1-D, Class A.

2.11 GEOTEXTILE

A. When required, horizontal and vertical joints between panels shall be covered by a geotextile of type and grade as recommended by the Wall Company.

2.12 ADHESIVE

A. Per Wall Company's standard.

2.13 BEARING PADS

A. Horizontal rubber bearing pads shall be of type and grade recommended and supplied by the Wall Company.

2.14 LIFTING DEVICES

A. Per Wall Conpany's standard.

2.15 SELECT MATERIAL FOR MSE WALL BACKFILL

A. See Section 02832S – Select Material for MSE Walls.

PART 3 EXECUTION

3.1 GENERAL

- A. Arrange for a qualified representative (minimum 5 years experience with MSE wall design and construction), from the selected Wall Company, to be directly involved and provide technical assistance during all phases of construction of the entire wall(s), including being at the project site during all phases of wall construction. The Wall Company shall provide assurance that the completed wall(s) meet all Department and Wall Company specifications. Note: Where the Department's and the Wall Company's specifications differ, the stricter of the two shall be applied. The representative is responsible for training the Contractor and/or Department inspectors in proper quality control for construction of the walls. The Wall Company representative shall report any irregularities to the Engineer.
- B. Haul, store, and ship wall materials so as to minimize the potential of producing any type of defects. Store panels such that the tie strips do not bend.
- C. Perform excavation and foundation preparation (including removal of unsuitable soils) as described in Section 02832S.
- D. Construct wall system in accordance with the approved plans, this specifications, and the Wall Company's recommendations and construction manual.

3.2 LEVELING PAD

- A. Prepare the subgrade soils and/or fill so as to cast the leveling pad to the design elevations shown on the drawings, to ensure complete contact of the retaining wall units with the base
- B. Place cast-in-place concrete leveling pad upon undisturbed in-situ soils, or upon properly placed and compacted fill as per Section 02832S. Place leveling pad to a minimum thickness of 6 inches.
- C. Allow leveling pad to cure for the least 12 hours prior to placing concrete panels.

D. Use rubber, wood, or metal shims as necessary to make final adjustments to the wall panel to facilitate level placement of the panel.

3.3 WALL CONSTRUCTION

- A. Place wall backfill and reinforcement as described in Section 02832S.
- B. Handle panels by means of lifting device set into upper edge of the panels and set in position vertically.
- C. Place panels on successive horizontal lifts in the sequence shown on the approved plans as backfill placement proceeds.
- D. Assuming reinforcement layers must be partially or fully severed in the location of an obstruction (such as a caisson foundation, guardrail post, catch basin, drop inlet, or culvert) in the wall soil reinforcement zone, reinforcement design shall be modified using one of the following three alternatives:
 - 1. Design the surrounding reinforcement layers to carry the additional load which would have been carried by the severed reinforcement.
 - 2. Place a structural frame around the obstruction, which is capable of transferring loads from the reinforcements on one side of the obstruction to reinforcements on the other side of the obstruction.
 - 3. If the soil reinforcement consists of discrete strips or bar mats rather than continuous sheets, splay the reinforcement around the obstructions.
- E. Soil reinforcement strips shall generally be placed normal to the face of the wall in plan view. However, where required to splay the strips around obstructions, the strips shall be skewed (minimizing the skew angle), but not more than 15 degrees unless approved the Wall Company. However, in no case shall the maximum horizontal spacing between longitudinal reinforcing straps be greater than 7 feet.
- F. Wall panel horizontal alignment tolerance shall be 0.7 percent. Vertical tolerance shall be 7/8 inch when measured along the 10-foot straight edge. The overall vertical tolerance of the wall (plumbness from top to bottom) shall not exceed 1 1/4 inches per 20 feet of wall height. Wall panel levelness tolerance shall be 5/8 inch per 10 feet.
- G. All joint shall be uniform. During construction the maximum allowable offset in any panel joint shall be 7/16 inch. Joint width shall be 1 1/4 inches maximum and 1/2 inch minimum.

H. Check panel tolerance and reset prior to placement of the next panel if out of specification.

3.4 SAMPLING AND TESTING

- A. Certificated of Compliance. Furnish to the Engineer copies of the certificate of compliance for materials and the results of any tests performed by the Wall Company on the materials.
- B. Select Material Density Testing. The Engineer will make at least one density determination per 8-inch lift for each 100 feet of retaining wall. The test will be made at random locations; but will be at least 3 feet from back of wall.
- C. Concrete Testing. Strength, slump, air, and yield tests will be conducted in accordance with Section 03055.

3.5 PANEL ACCEPTANCE

- A. Meet 28-day compression test. Panels which meet 75 percent of 28-day strength within 7 days are acceptable for placement in the wall.
- B. No precast panel shall be placed in the wall unit until it has been cured for minimum of 7 days.
- C. All panels shall be visually free of defects.
- D. Submit certificate of compliance to the Engineer.

SECTION 02834S

MSE WALLS USING CONCRETE FACING PANELS AND GEOGRID REINFORCING ELEMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Furnish material and construct mechanically stabilized earth (MSE) walls using a Department approved wall system employing concrete panel facings and geogrid reinforcing elements.
- B. Make arrangements to purchase the face panels, reinforcing steel, geogrid, fasteners, joint filler, and all necessary attachments from the selected Wall Company.

1.8 RELATED SECTIONS

- A. Section 02831S: Retaining Wall Alternate Systems
- B. Section 02832S: Select Material for MSE Walls
- C. Section 03055: Portland Cement Concrete
- D. Section 03211: Reinforcing Steel and Welded Wire
- E. Section 03310: Structural Concrete

1.9 SUBMITTALS

- A. Submit sample of the texture for approval by the Engineer.
- B. Provide verification that special design of the upper 10 feet of wall has been completed at locations where the design earthquake peak horizontal ground acceleration coefficient is 0.30g or greater.

MSE Walls Using Concrete Facing Panels and Geogrid Reinforcing Elements 02834S - 1 of 7

- C. Provide all other submittals required in Section 02831S.
- D. Do not start work on any wall until working drawings have been reviewed by the Engineer. The Engineer's review of the Contractor's drawings does not relieve the Contractor of any responsibility under the contract for the successful completion of the work.

PART 2 PRODUCTS

2.5 PRECAST CONCRETE WALL PANELS

- A. Concrete. Class AA(AE) per Section 03055 and Section 03310, having f'c (at 28 days) of at least 4000 psi.
- B. Uniformity. The architectural treatment for all MSE panel walls shall be consistent throughout the project and shall match all other structural elements incorporated in the project.
- C. Reinforcing steel shall have a minimum cover of 2.0 inches.
- D. Casting. Cast panels on a flat area or approved architectural treatment, with the front face down. Tie strip guides shall be set at back face. The concrete in each unit shall be placed without interruption. Vibration shall be done with approved equipment, such that the concrete is forced into corners of the forms to prevent stone pockets or cleavage planes. Use clean form oil.
- E. Curing. Use membrane-curing compound method
 - 1. Keep surfaces wet and moist until the curing compound is applied.
 - 2. Complete all patching or surface finishing before applying compound.
 - 3. Spray the entire surface of the concrete with a membrane curing compound. Apply the compound at a uniform rate of 11 oz/yd² of area.
 - 4. Immediately re-spray any membrane damage which occurs during the curing period.
 - 5. Removal of Forms. Leave forms in place until they can be removed without damage to the unit.

F. Concrete Finish

- 1. Front face of panels for wall shall have a Class 1 finish. Thickness of architectural treatment shall be in addition to required design thickness of wall
- 1. The back face of panels shall have a uniform surface finish. It shall be roughly screened to eliminate open pockets of aggregate and surface distortion in excess of ½ inch.

G. Tolerances

- 1. All dimensions $\pm -3/16$ inch.
- 2. Angular distortion with regard to the height of panel not to exceed 3/16 inch in 5 feet.
- 3. Surface defects on form surfaces not more than 1/8 inch in 5 feet.
- H. Rejection. Panels will be subject to rejection if:
 - 1. They do not meet the above-mentioned requirements.
 - 2. They contain defects due to imperfect molding.
 - 3. They have any honeycomb.
 - 4. They have open texture on front face.
- G. Marking. Mark the date of manufacture on the rear side of each panel.

2.6 REINFORCING STEEL

- A. Epoxy coated 20 mils thick and conforming to Section 03211.
- B. All reinforcing steel shall be the specified size and free from any defects.

2.3 LEVELING PAD CONCRETE

A. Use Class A or Class B concrete per Section 03055.

2.4 GEOGRID

- A. The geogrid shall consist of a regular grid network of integrally connected, discontinuous, select high-density polyethylene or polypropylene resin polymer tensile elements. Aperture geometry shall be sufficient to permit significant mechanical interlock with the surrounding soil and/or rock. The geogrid structure shall be dimensionally stable and be able to retain its geometry under manufacture, transport, and installation.
- B. Provide junction strength, minimum GRI-GG2 of 90 percent of ultimate strength.
- C. Provide maximum strain of 10 percent for tension creep test, 10,000 hours for 75-year design life, GRI-GG3.
- D. Provide ultimate strength, minimum GRI-GR1 as shown on plans.
- E. All soil reinforcement and attachment devices shall be carefully inspected to ensure they are true to size and free from defects that may impair their strength and durability.

- F. Prevent mud, wet concrete, epoxy and similar contaminants from coming in contact with and affixing to the soil reinforcement products.
- G. Store soil reinforcement products as recommended by the Wall Company.

2.5 REINFORCED WELDED WIRE MESH AND LOOP INBEDS

A. Meeting minimum requirements of AASHTO M-32 and AASHTO M-55, and be galvanize coated 3.4 mils thick in accordance with AASHTO M-111 (ASTM A-123).

2.6 PANEL FASTENERS

A. Bolts and nuts shall be hexagonal cap screw and galvanize coated, meeting minimum requirements of ASTM A-325 and ASTM A-153.

2.7 OTHER FASTENERS

A. Fasteners to wingwalls and abutment walls, if required, shall be provided by the Wall Company.

2.8 CURING COMPOUND

A. AASHTO M-148 Type 1-D, Class A.

2.9 GEOTEXTILE

A. Horizontal and vertical joints between panels shall be covered by a geotextile of the type and grade as recommended by the Wall Company.

2.10 ADHESIVE

A. Per Wall Company's standard.

2.11 LIFTING DEVICES

A. Per Wall Conpany's standard.

2.12 BEARING PADS

- A. Vertical or inclined joints.
- C. Horizontal rubber bearing pads shall be of type and grade recommended and supplied by the Wall Company.

2.13 SELECT MATERIAL FOR MSE WALL BACKFILL

A. See Section 02832S – Select Material for MSE Walls.

PART 3 EXECUTION

3.1 GENERAL

- A. Arrange for a qualified representative (minimum 5 years experience with MSE wall design and construction), from the selected Wall Company, to be directly involved and provide technical assistance during all phases of construction of the entire wall(s), including being at the project site during all phases of wall construction. The Wall Company shall provide assurance that the completed wall(s) meet all Department and Wall Company specifications. Note: Where the Department's and the Wall Company's specifications differ, the stricter of the two shall be applied. The representative is responsible for training the Contractor and/or Department inspectors in proper quality control for construction of the walls. The Wall Company representative shall report any irregularities to the Engineer.
- B. Haul, store, and ship wall materials so as to minimize the potential of producing any type of defects. Store panels such that the tie strips do not bend.
- C Perform excavation and foundation preparation (including removal of unsuitable soils) as described in Section 02832S.
- D. Construct wall system in accordance with the approved plans, this specifications, and the Wall Company's recommendations and construction manual.

3.2 LEVELING PAD

- A. Prepare the subgrade soils and/or fill so as to cast the leveling pad to the design elevations shown on the drawings, to ensure complete contact of the retaining wall units with the base.
- B. Place cast-in-place concrete leveling pad upon undisturbed in-situ soils, or upon properly placed and compacted fill as per Section 02832S. Place leveling pad to a minimum thickness of 6 inches.
- C. Allow leveling pad to cure for the least 12 hours prior to placing concrete panels.
- E. Use rubber, wood, or metal shims as necessary to make final adjustments to the wall panel to facilitate level placement of the panel.

3.3 GEOGRID INSTALLATION

- A. Verify the correct orientation (roll direction) of the geogrid.
- B. Lay the geogrid soil reinforcement horizontally on the compacted backfill at the proper elevations as designed.
- C. Connect geogrid to the concrete wall units as required by the Wall Company.
- D. Pull the geogrid taut to eliminate loose folds and removing slack in the geogrid at the wall unit connections, pretension the geogrid, and then stake or otherwise secure the back edge of the geogrid before and during backfill and compaction.
- E. Follow the Wall Company's guidelines relative to overlap requirements of uniaxial and biaxial geogrids.
- F. Assuming reinforcement layers must be partially or fully severed in the location of an obstruction (such as a caisson foundation, guardrail post, catch basin, drop inlet, or culvert) in the wall soil reinforcement zone, reinforcement design shall be modified using one of the following three alternatives:
 - 1. Design the surrounding reinforcement layers to carry the additional load which would have been carried by the severed reinforcement.
 - 2. Place a structural frame around the obstruction, which is capable of transferring loads from the reinforcements on one side of the obstruction to reinforcements on the other side of the obstruction.
 - 2. If the soil reinforcement consists of discrete strips or bar mats rather than continuous sheets, splay the reinforcement around the obstructions.

3.4 WALL CONSTRUCTION

- A. The wall system shall be constructed in accordance with the approved plans, this specification, and the Wall Company's recommendations and construction manual.
- B. Place wall backfill and reinforcement as described in Section 02832S.
- C. Handle panels by means of lifting device set into upper edge of the panels and set in position vertically.
- D. Place panels on successive horizontal lifts in the sequence shown on the approved plans as backfill placement proceeds.

- E. Wall panel horizontal tolerance shall be +/- 1 1/2 inches in 30 feet (3 inches overall). Vertical tolerances shall be ³/₄ inch when measured along a 10 foot straight edge. The overall vertical tolerance of the wall (plumbness from top to bottom) shall not exceed 1 3/16 inch per 20 feet of wall height. Wall panel levelness tolerance shall be 5/8 inch per 10 feet.
- F. All joints shall be uniform. During construction the maximum allowable offset in any panel joint shall be 3/8 inch. Joint width shall be 1 3/16 inches maximum and 5/8 inch minimum
- G. Check panel tolerance and reset prior to placement of the next panel if out of specification.

3.5 SAMPLING AND TESTING

- A. Certificated of Compliance. Furnish to the Engineer copies of the certificate of compliance for materials and the results of any tests performed by the Wall Company on the materials.
- B. Select Material Density Testing. The Engineer will make at least one density determination per 8-inch lift for each 100 feet of retaining wall. The test will be made at random locations; but will be at least 3 feet from back of wall.
- C. Concrete Testing. Strength, slump, air, and yield tests will be conducted in accordance with Section 03055.

3.6 PANEL ACCEPTANCE

- A. Meet 28-day compression test. Panels which meet 75 percent of 28-day strength within 7 days are acceptable for placement in the wall.
- B. No precast panel shall be placed in the wall unit until it has been cured for a minimum of 7 days.
- C. All panels shall be visually free of defects.
- D. Submit certificate of compliance to the Engineer.

SECTION 02835S

MSE WALLS USING MODULAR BLOCK UNITS AND METAL REINFORCING ELEMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Furnish material and construct MSE walls using a wall system employing modular block units for the wall face and metal reinforcing elements.
- B. Make arrangements to purchase the modular block wall units, metal reinforcement, joint filler, and all necessary attachments from the selected Wall Company.

1.10 RELATED SECTIONS

- A. Section 02831S: Retaining Wall Alternate Systems
- B. Section 02832S: Select Material for MSE Walls
- C. Section 03055: Portland Cement Concrete
- D. Section 03211: Reinforcing Steel and Welded Wire
- E. Section 03310: Structural Concrete

1.11 SUBMITTALS

- A. Submit sample of the texture for approval by the Engineer.
- B. Submit to the Department for approval, a minimum of 3 color samples of proposed segmental concrete unit colors, matched to colors of local features or as otherwise indicated, at least 4 weeks prior to beginning manufacture of the block units.

MSE Walls Using Modular Block Units and Metal Reinforcing Elements 02835S - 1 of 8

- C. Submit verification that the calculation of coefficient of lateral earth pressure is a factor of safety of 2.5 at the top of the wall as required by AASHTO.
- D. Provide verification that the allowable tensile load for the soil reinforcements is 0.48Fy as required by AASHTO for steel grid-type reinforcement.
- E. Provide verification that special design of the upper 10 feet of wall has been completed at locations where the design earthquake peak horizontal ground acceleration coefficient is 0.30g or greater.
- F. Provide design details, which protect the reinforcement connections from corrosion due to salt.
- G. Provide all other submittals required in Section 02831S.
- H. Do not start work on any wall until working drawings have been reviewed by the Engineer. The Engineer's review of the Contractor's drawings does not relieve the Contractor of any responsibility under the contract for the successful completion of the work.

PART 2 PRODUCTS

2.8 CONCRETE MODULAR BLOCK UNITS

- A. Provide drycast concrete wall units having a minimum net 28-day compressive strength of 3000 psi, and a maximum moisture absorption of 6.0 lb/ft³, both in accordance with ASTM C-140.
- B. Concrete block shall be manufactured using a combination of cement, aggregates, admixtures, and other constituents which have been verified to be compatible with each other and with the environment in which the block is required to perform, including sulfate soils, and/or groundwater.
- C. Cement shall meet the requirements of Section 03055.
- D. Pozzolan shall meet the requirements of Section 03055.
- E. Blended cement shall meet the requirements of Section 03055.
- F. Chemical admixtures shall meet the requirements of Section 03055.
- G. Provide coating to block faces with sealer to minimize chloride intrusion into units in accordance with Article 7.3.1.4 Division II of AASHTO 1999 *Interim Standard Specifications for Highway Bridges*.

- H. Normal weight aggregates shall meet the requirements of Section 03055.
- I. Lightweight aggregates, if used and approved, shall meet the additional requirements of ASTM C-331.
- J. Provide block units with dimensions in conformance with the wall manufacturer's standard. Permissible variations are plus 1/8 inch and minus 1/16 inch.
- K. Provide block units having angled sides capable of producing concave and convex alignment curves with a minimum radius of 3.3 feet.
- L. Provide block units having a polymeric efflorescence control admixture.
- M. Finish and Appearance: All units shall be sound and free from cracks or other defects that would interfere with the proper placement of the unit, or significantly impair the strength or permanence of the construction. Minor cracks incidental to the usual method of manufacture or minor chipping resulting from shipment and delivery are not grounds for rejection. The face or faces of units that are to be exposed shall be free of chips, cracks, or other imperfections when viewed from a distance of 33 feet under diffused lighting. Up to five percent of shipment may contain slight cracks or small chips not longer than 1 inch.
- N. Notify the Engineer, in writing, at least 72 hours before beginning the casting of concrete modular block units.
- O. Sampling and Testing: Acceptance of the concrete units with respect to compressive strength will be determined on a lot basis. The lot will be randomly sampled in accordance with ASTM Specification C 140. Compressive strength test specimens shall be cored or shall conform to the saw-cut coupons provisions of Section 5.2.4 of ASTM Specification C 140.
 - 1. The rate of block sampling shall be:

Table 1

Lot Size	Samples	
0 – 10,000	6 units	
10,000 - 100,000	12 units	
Greater than 100,000	6 units per 50,000	

2. Provide additional samples if required by the Engineer.

- P. Rejection: Units shall be rejected because of failure to meet any of the requirements specified above. In addition, any or all of the following defects will be sufficient cause for rejection:
 - 1. Defects that indicate imperfect molding.
 - 2. Defects indicating honeycomb or open-texture concrete.
 - 3. Cracked or severly chipped units.
 - 4. Color variation on exposed face(s) of unit due to excess form oil or other reasons.

2.2 LEVELING PAD CONCRETE

A. Use Class A or Class B concrete per Section 03055.

2.3 MODULAR BLOCK-UNIT FILL

A. Use free-draining crushed stone, predominantly 3/8 to 3/4 inch, with no more than 5 percent passing the No. 200 sieve, within the modular block units requiring fill material.

2.4 REINFORCING STRIPS

- A. Hot rolled from steel bars, galvanize coated 3.4 mils thick, meeting minimum requirements of ASTM D1784, Grade 65; and AASHTO M-111 (ASTM A-123).
- B. All reinforcing strips shall be the specified size (See 02831S, 1.1E-1) and free from defects.

2.5 REINFORCED WELDED WIRE MESH AND LOOP INBEDS

A. Meeting minimum requirements of AASHTO M-32 and AASHTO M-55, and be galvanize coated 3.4 mils thick as per AASHTO M-111 (ASTM A-123).

2.6 FIBERGLASS AND STEEL PINS

- A. Provide ½ inch diameter fiberglass connecting pins, where used, having a minimum flexural strength of 128 ksi and short beam shear of 6.5 ksi.
- B. Provide steel connecting pins galvanized coated 3.4 mils thick, meeting Wall Company requirements.

2.7 OTHER FASTENERS

A. Fasteners to wingwalls and abutment wall, if required, shall be provided by the selected Wall Company.

2.8 DAMAGED GALVANIZATION

A. As an alternative to replacement, any reinforcing steel, reinforcing strips, wire mesh or fasteners that has damaged galvanization, spray with zinc paint covering the entire area that has been damaged.

2.9 GEOTEXTILE

A. Horizontal and vertical joints between block units shall be covered by a geotextile of the type and grade as recommended by the Wall Company.

2.10 ADHESIVE

A. Per Wall Company's standard.

2.11 SELECT MATERIAL FOR REINFORCED EARTH BACKFILL

A. See Special Provision Section 02832S – Select Material for MSE Walls.

PART 3 EXECUTION

3.1 GENERAL

- A. Arrange for a qualified representative (minimum 5 years experience with MSE wall design and construction), from the selected Wall Company, to be directly involved and provide technical assistance during all phases of construction of the entire wall(s), including being at the project site during all phases of wall construction. The Wall Company shall provide assurance that the completed wall(s) meet all Department and Wall Company specifications. Note: Where the Department's and the Wall Company's specifications differ, the stricter of the two shall be applied. The representative is responsible for training the Contractor and/or Department inspectors in proper quality control for construction of the walls. The Wall Company representative shall report any irregularities to the Engineer.
- B. Haul, store, and ship wall materials so as to minimize the potential of producing any type of defects.
- C. Perform excavation and foundation preparation (including removal of unsuitable soils) as described in Section 02832S.
- D. Construct the wall system in accordance with the approved plans, this specification, and the Wall Company's recommendations and construction manual.

3.2 LEVELING PAD

- A. Prepare the subgrade soils and/or fill so as to cast the leveling pad to the design elevations shown on the drawings, to ensure complete contact of the retaining wall units with the base.
- B. Place cast-in-place concrete leveling pad upon undisturbed in-situ soils, or upon properly placed and compacted fill as per Section 02832S. Place leveling pad to a minimum thickness of 6 inches.
- C. Allow leveling pad to cure for at least 12 hours prior to placing modular blocks.

3.3 MODULAR BLOCK UNIT INSTALLATION

- A. Place wall backfill as described in Section 02832S.
- B. Place the first course of modular block units on the leveling pad. Check the wall units for level and alignment. The first course is the most important to ensure accurate and acceptable results.
- C. Ensure block units are in full contact with the leveling pad.
- D. Install connecting devices in block units as required by the Wall Company.
- E. For block units requiring fill material, fill all voids in block units with modular block unit fill. Tamp fill. Ensure each wall course is completely filled, backfilled, and compacted prior to proceeding to the next wall course.
- F. Where connecting pins are used, lay up each course ensuring connecting pins protrude into adjoining courses above a minimum of 1 inch.
- G. Pull each block unit forward, away from the embankment, against connecting pins in the previous course and backfill as the course is completed. Repeat procedure to the extent of the wall height.
- H. As appropriate where the wall changes elevation, the units can be stepped with grade or turned into the embankment with the convex return end. Provide appropriate buried units on the compacted leveling pad in the area of the convex return end.
- I. Horizontal tolerance shall be +/- 1 ½ inches in 30 feet (3 inches overall). Vertical tolerance shall be ¾ inch when measured along a 10-foot straight edge. The overall vertical tolerance of the wall (plumbness from top to bottom) shall not

- exceed $1\frac{1}{2}$ inch per 20 feet of wall height. Levelness tolerance shall be 5/8 inch per 10 feet.
- J. All joints shall be uniform. During construction the maximum allowable offset in any block joint shall be 3/8 inch. Joint width shall be ½ inch maximum and ¼ inch minimum

3.4 STEEL SOIL REINFORCEMENT INSTALLATION

- A. Lay the steel reinforcement horizontally on the compacted backfill at the proper elevations as designed.
- B. Connect steel reinforcement to the block units as required by Wall Company.
- C. Pull the reinforcement taut to eliminate any slack; then secure the back edge of the reinforcement before and during backfilling and compaction.
- D. Assuming reinforcement layers must be partially or fully severed in the location of an obstruction (such as a caisson foundation, guardrail post, catch basin, drop inlet, or culvert) in the wall soil reinforcement zone, reinforcement design shall be modified using one of the following three alternatives:
 - 1, Design the surrounding reinforcement layers to carry the additional load which would have been carried by the severed reinforcement.
 - 2. Place a structural frame around the obstruction, which is capable of transferring loads from the reinforcements on one side of the obstruction to reinforcements on the other side of the obstruction.
 - 3. If the soil reinforcement consists of discrete strips or bar mats rather than continuous sheets, splay the reinforcement around the obstructions.
- E. Soil reinforcement strips shall generally be placed normal to the face of the wall in plan view. However, where required to splay the strips around obstructions, the strips shall be skewed (minimizing the skew angle), but no more than 15 degrees unless approved by the Wall Company. However, in no case shall the maximum horizontal spacing between longitudinal reinforcing straps be greater than 7 feet.

3.5 WALL CAP INSTALLATION

A. Provide a permanent connection between the wall cap units and the top course of the wall units. Use an approved construction adhesive or epoxy for the connection.

3.6 SAMPLING AND TESTING

- A. Certificated of Compliance. Furnish to the Engineer copies of the certificate of compliance for materials and the results of any tests performed by the Wall Company on the materials.
- B. Select Material Density Testing. The Engineer will make at least one density determination per lift of backfill for every 100 feet of retaining wall. The tests will be made at random locations; but will be at least 3 feet from back of wall.
- C. Concrete Testing. Strength, slump, air, and yield tests will be conducted in accordance with Section 03055.

3.7 BLOCK UNITS ACCEPTANCE

- B. Meet 28-day compression test. Block units which meet 75 percent of 28-day strength within 7 days are acceptable for placement in the wall.
- C. No block units shall be placed in the wall unit until it has been cured for a minimum of 7 days.
- C. All block units shall be visually free of defects.
- D. Submit certificate of compliance to the Engineer.

END OF SECTION

SECTION 02836S

MSE WALLS USING MODULAR BLOCK UNITS AND GEOGRID REINFORCING ELEMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Furnish material and construct MSE walls using a wall system employing modular block units for the wall face and geogrid reinforcing elements.
- B. Make arrangements to purchase the modular block wall units, geogrid reinforcement, joint filler, and all necessary attachments from the selected Wall Company.

1.2 RELATED SECTIONS

- A. Section 02831S: Retaining Wall Alternate Systems
- B. Section 02832S: Select Material for MSE Walls
- C. Section 03055: Portland Cement Concrete
- D. Section 03211: Reinforcing Steel and Welded Wire
- E. Section 03310: Structural Concrete

1.3 SUBMITTALS

- A. Submit sample of the texture for approval by the Engineer.
- B. Submit to the Department for approval a minimum of 3 color samples of proposed segmental concrete unit colors, matched to colors of local features, or as otherwise indicated, at least 4 weeks prior to beginning manufacture of the block units.

MSE Walls Using Modular Block Units and Geogrid Reinforcing Elements 02836S - 1 of 8

- C. Submit verification that the calculation of coefficient of lateral earth pressure is a factor of safety of 2.5 at the top of the wall, as required by AASHTO.
- D. Provide verification that special design of the upper 10 feet of wall has been completed at locations where the design earthquake peak horizontal ground acceleration coefficient is 0.30g or greater.
- E. Provide all other submittals required in Section 02831S.
- F. Do not start work on any wall until working drawings have been reviewed by the Engineer. The Engineer's review of the Contractor's drawings does not relieve the Contractor of any responsibility under the contract for the successful completion of the work.

PART 2 PRODUCTS

2.1 CONCRETE MODULAR BLOCK UNITS

- A. Provide dry-cast concrete wall units having a minimum net 28-day compressive strength of 3000 psi, and a maximum moisture absorption of 6 lb/ft³, both in accordance with ASTM C-140.
- B. Concrete block shall be manufactured using a combination of cement, aggregates, admixtures, and other constituents which have been verified to be compatible with each other and with the environment in which the block is required to perform, including sulfate soils, and/or groundwater.
- C. Cement shall meet the requirements of Section 03055.
- D. Pozzolan shall meet the requirements of Section 03055.
- E. Blended cement shall meet the requirements of Section 03055.
- F. Chemical admixtures shall meet the requirements of Section 03055.
- G. Provide coating to block faces with sealer to minimize chloride intrusion into units in accordance with Article 7.3.1.4 Division II of AASHTO 1999 *Interim Standard Specifications for Highway Bridges*.
- H. Normal weight aggregates shall meet the requirements of Section 03055.
- I. Lightweight aggregates, if used and approved, shall meet the additional requirements of ASTM C331.
- J. Provide block units with dimensions in conformance with the Wall Company's standard. Permissible variations are plus 1/8 inch and minus 1/16 inch.

- K. Provide block units having angled sides capable of producing concave and convex alignment curves with a minimum radius of 3.3 feet.
- L. Provide block units having a polymeric efflorescence control admixture.
- M. Finish and Appearance: All units shall be sound and free from cracks or other defects that would interfere with the proper placement of the unit, or significantly impair the strength or permanence of the construction. Minor cracks incidental to the usual method of manufacture or minor chipping resulting from shipment and delivery are not grounds for rejection. The face or faces of units that are to be exposed shall be free of chips, cracks, or other imperfections when viewed from a distance of 33 feet under diffused lighting. Up to five percent of shipment may contain slight cracks or small chips not longer and 1 inch.
- N. Notify the Engineer in writing at least 72 hours before beginning the casting of concrete modular block units.
- O. Sampling and Testing: Acceptance of the concrete units, with respect to compressive strength, will be determined on a lot basis. The lot will be randomly sampled in accordance with ASTM Specification C 140. Compressive strength test specimens shall be cored or shall conform to the saw-cut coupons provisions of Section 5.2.4 of ASTM Specification C 140.
 - 1. The rate of block sampling shall be:

Table 1

Lot Size	Samples		
0-10,000	6 units		
10,000 - 100,000	12 units		
Greater than 100,000	6 units per 50,000		

- 2. Provide additional samples if required by the Engineer.
- E. Rejection: Units shall be rejected because of failure to meet any of the requirements specified above. In addition, any or all of the following defects will be sufficient cause for rejection:
 - 1. Defects that indicate imperfect molding.
 - 2. Defects indicating honeycomb or open-texture concrete.
 - 3. Cracked or severely chipped units.
 - 4. Color variation on exposed face(s) of unit due to excess form oil or other reasons.

2.2 LEVELING PAD CONCRETE

A. Use Class A or Class B concrete per Section 03055.

2.3 MODULAR BLOCK-UNIT FILL

A. Use free-draining crushed stone, predominantly 3/8 to 3/4 inch, with no more than 5 percent passing the No. 200 sieve, within the modular block units requiring fill material.

2.4 GEOGRID

- A. The geogrid shall consist of a regular grid network of integrally connected, discontinuous, select high-density polyethylene or polypropylene resin polymer tensile elements. Aperture geometry shall be sufficient to permit significant mechanical interlock with the surrounding soil and/or rock. The goegrid structure shall be dimensionally stable and be able to retain its geometry under manufacture, transport, and installation.
- B. Provide junction strength, minimum GRI-GG2 of 90 percent of ultimate strength.
- C. Provide maximum strain of 10 percent for tension creep test, 10,000 hours for 75-year design life, GRI-GG3.
- D. Provide ultimate strength, minimum GRI-GR1 as shown on plans.
- E. All soil reinforcement and attachment devices shall be carefully inspected to ensure they are true to size and free from defects that may impair their strength and durability.
- F. Prevent mud, wet concrete, epoxy, and similar contaminants from coming in contact with and affixing to the soil reinforcement products.
- G. Store soil reinforcement products as recommended by the Wall Company.

2.5 FIBERGLASS PINS

A. Provide ½ inch diameter fiberglass connecting pins, where used, having a minimum flexural strength of 128 ksi and short beam shear of 6.5 ksi.

2.6 OTHER FASTENERS

A. Fasteners to wingwalls and abutment walls, if required, shall be provided by the Wall Company.

2.7 GEOTEXTILE

A. Horizontal and vertical joints between block units shall be covered by a geotextile of the type and grade as recommended by the Wall Company.

2.8 ADHESIVE

A. Per Wall Company's standard.

2.9 SELECT MATERIAL FOR WALL BACKFILL

A. See Special Provision Section 02832S – Select Material or MSE Walls.

PART 3 EXECUTION

3.1 GENERAL

- A. Arrange for a qualified representative (minimum 5 years experience with MSE wall design and construction), from the selected Wall Company, to be directly involved and provide technical assistance during all phases of construction of the entire wall(s), including being at the project site during all phases of wall construction. The Wall Company shall provide assurance that the completed wall(s) meet all Department and Wall Company specifications. Note: Where the Department's and the Wall Company's specifications differ, the stricter of the two shall be applied. The representative is responsible for training the Contractor and/or Department inspectors in proper quality control for construction of the walls. The Wall Company representative shall report any irregularities to the Engineer.
- B. Haul, store, and ship wall materials so as to minimize the potential of producing any type of defects.
- C. Perform excavation and foundation preparation (including removal of unsuitable soils) as described in Section 02832S.
- D. Construct the wall system in accordance with the approved plans, this specifications, and the Wall Company's recommendations and construction manual

3.2 LEVELING PAD

A. Prepare the subgrade soils and/or fill so as to cast the leveling pad to the design elevations shown on the drawings, to ensure complete contact of the retaining wall units with the base.

- B. Place cast-in-place concrete leveling pad upon undisturbed in-situ soils, or upon properly placed and compacted fill as per Section 02832S. Place leveling pad to a minimum thickness of 6 inches.
- C. Allow leveling pad to cure for at least 12 hours prior to placing modular blocks.

3.3 MODULAR BLOCK UNIT INSTALLATION

- A. Place wall backfill as described in Section 02832S.
- B. Place the first course of modular block units on the leveling pad. Check the wall units for level and alignment. The first course is the most important to ensure accurate and acceptable results.
- C. Ensure block units are in full contact with the leveling pad.
- D. Install connecting devices in block units as required by the Wall Company.
- E. For block units requiring fill material, fill all voids in block units with modular block unit fill. Tamp fill. Ensure each wall course is completely filled, backfilled, and compacted prior to proceeding to the next wall course.
- F. Where connecting pins are used, lay up each course ensuring connecting pins protrude into adjoining courses above a minimum of 1 inch.
- G. Pull each block unit forward, away from the embankment, against connecting pins in the previous course, and backfill as the course is completed. Repeat procedure to the extent of the wall height.
- H. As appropriate where the wall changes elevation, the units can be stepped with grade or turned into the embankment with the convex return end. Provide appropriate buried units on the compacted leveling pad in the area of the convex return end.
- I. Horizontal tolerance shall be +/- 1 ½ inches in 30 feet (3 inches overall). Vertical tolerance shall be ¾ inch when measured along a 10-foot straight edge. The overall vertical tolerance of the wall (plumbness from top to bottom) shall not exceed 1 ½ inch per 20 feet of wall height. Levelness tolerance shall be 5/8 inch per 10 feet.
- J. All joints shall be uniform. During construction the maximum allowable offset in any block joint shall be 3/8 inch. Joint width shall be ½ inch maximum and ¼ inch minimum

3.4 GEOGRID INSTALLATION

- A. Verify the correct orientation (roll directon) of the geogrid.
- B. Lay the geogrid soil reinforcement horizontally on the compacted backfill at the proper elevations as designed.
- C. Connect geogrid to the concrete wall units as required by Wall Company.
- D. Pull the geogrid taut to eliminate loose folds and removing slack in the geogrid at the wall unit connections, pretension the geogrid, and then stake or otherwise secure the back edge of the geogrid before and during back fill and compaction.
- E. Follow the Wall Company's guidelines relative to overlap requirements of uniaxial and biaxial geogrids.
- F. Assuming reinforcement layers must be partially or fully severed in the location of an obstruction (such as a caisson foundation, guardrail post, catch basin, drop inlet, or culvert) in the wall soil reinforcement zone, reinforcement design shall be modified using one of the following three alternatives:
 - 1. Design the surrounding reinforcement layers to carry the additional load, which would have been carried by the severed reinforcement.
 - 2. Place a structural frame around the obstruction, which is capable of transferring loads from the reinforcements on one side of the obstruction to reinforcements on the other side of the obstruction.

3.5 WALL CAP INSTALLATION

A. Provide a permanent connection between the wall cap units and the top course of the wall units. Use an approved construction adhesive or epoxy for the connection.

3.6 SAMPLING AND TESTING

- A. Certificates of Compliance. Furnish to the Engineer copies of the certificate of compliance for materials and the results of any tests performed by the Wall Company on the materials.
- B. Select Material Density Testing. The Engineer will make at least one density determination per lift of backfill for every 100 feet of retaining wall. The tests will be made at random locations; but will be at least 3 feet from back of wall.
- C. Concrete Testing. Strength, slump, air, and yield tests will be conducted in accordance with Section 03055.

3.7 BLOCK UNITS ACCEPTANCE

- A. Meet 28-day compression test. Block units which meet 75 percent of 28-day strength within 7 days are acceptable for placement in the wall.
- B. No block units shall be placed in the wall unit until it has been cured for a minimum of 7 days.
- C. All block units shall be visually free of defects.
- D. Submit certificate of compliance to the Engineer.

END OF SECTION

SECTION 02837S

MSE TWO-STAGE WALLS USING CONCRETE FACING PANELS AND METAL REINFORCING ELEMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Furnish materials and construct two-stage mechanically stabilized earth (MSE) walls using a Department approved wall system employing metal reinforcing elements.
- B. Make arrangements to purchase the face panels, reinforcing steel, tie strips, fasteners, joint filler, and all necessary attachments from the selected Wall Company.

1.2 RELATED SECTIONS

- A. Section 02831S: Retaining Wall Alternate Systems
- B. Section 02832S: Select Material for MSE Walls
- C. Section 03055: Portland Cement Concrete
- D. Section 03211: Reinforcing Steel and Welded Wire
- E. Section 03310: Structural Concrete

1.3 SUBMITTALS

- A. Submit sample of the texture for approval by the Engineer.
- B. Provide verification that special design of the upper 10 feet of wall has been completed at locations where the design earthquake peak horizontal ground acceleration coefficient is 0.30g or greater.

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- C. Provide design details which protect the reinforcement connections from corrosion due to salt.
- D. Provide all other submittals required in Section 02831S
- E. Do not start work on any wall until working drawings have been reviewed by the Engineer. The Engineer's review of the Contractor's drawings does not relieve the Contractor of any responsibility under the contract for the successful completion of the work.

PART 2 PRODUCTS

2.1 PRECAST CONCRETE WALL PANELS

- A. Concrete. Class AA(AE) per Section 03055 and Section 03310, having f'c (at 28 days) of at least 4000 psi.
- B. Uniformity. The architectural treatment for all MSE panel walls shall be consistent throughout the project and shall match all other structural elements incorporated in the project.
- C. Reinforcing steel shall have a minimum cover of 2.0 inches.
- D. Casting. Cast panels on a flat area or approved architectural treatment, with the front face down. Tie strip guides shall be set at back face. The concrete in each unit shall be placed without interruption. Vibration shall be done with approved equipment, such that the concrete is forced into corners of the forms to prevent stone pockets or cleavage planes. Use clean form oil.
- E. Curing. Use membrane-curing compound method.
 - 1. Keep surfaces wet and moist until the curing compound is applied.
 - 2. Complete all patching or surface finishing before applying compound.
 - 3. Spray the entire surface of the concrete with a membrane-curing compound. Apply the compound at a uniform rate of 11 oz/yd² of area.
 - 4. Immediately re-spray any membrane damage, which occurs during the curing period.
 - 5, Removal of Forms. Leave forms in place until they can be removed without damage to the unit.

F. Concrete Finish

- 1. Front face of panels for wall shall have a Class 1 finish. Thickness of architectural treatment shall be in addition to required design thickness of wall.
- 2. The back face of panels shall have a uniform surface finish. It shall be roughly screened to eliminate open pockets of aggregate and surface distortion in excess of ½ inch.

G. Tolerances

- 1. All dimensions $\pm -3/16$ inch.
- 2. Angular distortion with regard to the height of panel not to exceed 3/16 inch in 5 feet.
- 3. Surface defects on form surfaces not more than 1/8 inch in 5 feet.
- H. Rejection. Panels will be subject to rejection if:
 - 1. They do not meet the above-mentioned requirements.
 - 2. They contain defects due to imperfect molding.
 - 3. They have any honeycomb.
 - 4. They have open texture on front face.
- I. Marking. Mark the date of manufacture on the rear side of each panel.

2.2 REINFORCING STEEL

- A. Epoxy coated 0.020 inch (20) mils thick and conforming to Section 03211.
- B. All reinforcing steel shall be the specified size and free from any defects.

2.3 LEVELING PAD CONCRETE

A. Use Class A or Class B concrete per Section 03055.

2.4 REINFORCING STRIPS

- A. Hot rolled from steel bars, galvanize coated 3.4 mils thick, meeting minimum requirements of ASTM D1784, Grade 65; and AASHTO M-111 (ASTM A-123).
- B. All reinforcing strips shall be the specified size (see 02831S, 1.1. E.1) and be free from any defects.

2.5 REINFORCED WELDED WIRE MESH AND LOOP INBEDS

A. Meeting minimum requirements of AASHTO M-32 and AASHTO M-55; and be galvanize coated 3.4 mils thick as per AASHTO M-111 (ASTM A-123).

2.6 WIRE FACING UNITS

A. Wire facing units shall be shop fabricated of cold-drawn steel wire conforming to the minimum requirements of AASHTO M-32 (ASTM A-182) and welded into the finished configuration in accordance with AASHTO M-55 (ASTM A-185). Galvanizing shall conform to the minimum requirements of AASHTO M-111 (ASTM A-123).

2.7 TIE STRIPS

- A. Shop fabricated, hot rolled steel conforming to minimum requirements of ASTM A-709M, Grade 345; ASTM A-123; and ASTM A-570, Grade 345; or equivalent; and be galvanize coated 3.4 mils thick in accordance with AASHTO M-111 (ASTM A-123).
- B. All tie strips shall be the specified size and free from any defects.

2.8 PANEL FASTENERS

A. Bolts and nuts shall be hexagonal cap screw and galvanized coated, meeting minimum requirements of ASTM A-325 and ASTM A-153.

2.9 OTHER FASTENERS

A. Fasteners to wingwalls and abutment wall, if required, shall be provided by the selected Wall Company.

2.10 CONNECTOR RODS

A. Connector rods shall be fabricated from cold-drawn steel wire conforming to the minimum requirements of AASHTO M-32 (ASTM A-82); and shall be galvanized in accordance with AASHTO M-111 (ASTM A-123).

2.11 HAIRPIN CONNECTORS

A. Hairpin connectors shall be shop fabricated of hot-rolled steel conforming to the minimum requirements of ASTM A-572, Grade 345 or equivalent; and shall be galvanized in accordance with AASHTO M-111 (ASTM A-123).

2.12 DAMAGED GALVANIZATION

A. As an alternative to replacement, any reinforcing steel, reinforcing strips, wire mesh, or fasteners that has damaged galvanization, spray with zinc paint covering the entire area that has been damaged.

2.13 CURING COMPOUND

A. AASHTO M-148, Type 1-D, Class A.

2.14 GEOTEXTILE

A. When required, horizontal and vertical joints between panels shall be covered by a geotextile of type and grade as recommended by the Wall Company.

2.15 ADHESIVE

A. Per Wall Company's standard.

2.16 BEARING PADS

A. Horizontal rubber bearing pads shall be of type and grade recommended and supplied by the Wall Company.

2.17 LIFTING DEVICES

A. Per Wall Company's standard.

2.18 SELECT MATERIAL FOR WALL BACKFILL

A. See Section 02832S – Select material for MSE Walls.

PART 3 EXECUTION

3.1 GENERAL

A. Arrange for a qualified representative (minimum 5 years experience with MSE wall design and construction), from the selected Wall Company, to be directly involved and provide technical assistance during all phases of construction of the entire wall(s), including being at the project site during all phases of wall construction. The Wall Company shall provide assurance that the completed wall(s) meet all Department and Wall Company specifications. Note: Where the Department's and the Wall Company's specifications differ, the stricter of the two shall be applied. The representative is responsible for training the Contractor and/or Department inspectors in proper quality control for construction of the

- walls. The Wall Company representative shall report any irregularities to the Engineer.
- B. Haul, store, and ship wall materials so as to minimize the potential of producing any type of defects. Store panels such that the tie strips do not bend.
- C. Perform excavation and foundation preparation (including removal of unsuitable soils) as described in Section 02832S.
- D. Construct wall system in accordance with the approved plans, this specification, and the Wall Company's recommendations and construction manual.

3.2 LEVELING PAD

- A. Prepare the subgrade soils and/or fill so as to cast the leveling pad to the design elevations shown on the drawings, to ensure complete contact of the retaining wall units with the base.
- B. Place cast-in-place concrete leveling pad upon undisturbed in-situ soils, or upon properly placed and compacted fill as per Section 02832S. Place leveling pad to a minimum thickness of 6 inches.
- C. Allow leveling pad to cure for the least 12 hours prior to placing concrete panels.
- D. Use rubber, wood, or metal shims, as necessary, to make final adjustments to the wall panel to facilitate level placement of the panel.

3.3 WALL CONSTRUCTION

- A. Place wall backfill and reinforcement for two-stage MSE walls as described in Section 02832S, and in Wall Company's Approved for Construction drawings.
- B. Backfill in the area of the void adjacent to the wire facing shall be placed in two approximately equal lifts, and the compactive effort shall meet the Wall Company's requirements.
- C. Placement of Select Material as wall backfill shall closely follow the erection of each course of wire facing units.
- D. Place backfill in such a manner as to avoid any damage or disturbance to the wall materials or misalignment of the wire facing units.
- E. Assuming reinforcement layers must be partially or fully severed in the location of an obstruction (such as a caisson foundation, guardrail post, catch basin, drop

inlet, or culvert) in the wall soil reinforcement zone, reinforcement design shall be modified using one of the following three alternatives:

- 1. Design the surrounding reinforcement layers to carry the additional load, which would have been carried by the severed reinforcement.
- 2. Place a structural frame around the obstruction, which is capable of transferring loads from the reinforcements on one side of the obstruction to reinforcements on the other side of the obstruction.
- 3. If the soil reinforcement consists of discrete strips or bar mats rather than continuous sheets, splay the reinforcement around the obstructions.
- F. Soil reinforcement strips shall generally be placed normal to the face of the wall in plan view. However, where required to splay the strips around obstructions, the strips shall be skewed (minimizing the skew angle), but not more than 15 degrees unless approved by the Wall Company. However, in no case shall the maximum horizontal spacing between longitudinal reinforcing straps be greater than 7 feet.
- G. The wire facing (first stage) of the two-stage system shall be constructed to the following tolerances:
 - 1. Horizontal alignment: 2 percent
 - 2. Vertical: Inward 2 percent; Outward 0.5 percent
 - 3. Overall plumbness: Inward 2 percent; No overall outward plumbness allowed.
- H. Prevent significant bulging of the wire facing between reinforcing layers. Bulging greater than 3 inches, between reinforcing layers, will require the portion of the wall, with the bulging exceeding 3 inches, be removed and reconstructed. Bulging will be measured by a plumb straightedge or by using a plumb-bob string held in front of the wall face. The bulge measurements shall be the difference in the horizontal measurement from the straight edge or plumb-bob string to the location of maximum bulge and the reinforcement layer immediately above or below the budge (whichever is greater).
- I. Proceed with placement of the second stage wall panels after confirmation is given by the Geotechnical Engineer that sufficient settlement has been achieved.
- J. Handle panels by means of lifting device set into upper edge of the panels and set in position vertically.
- K. Wall panel horizontal alignment tolerance shall be 0.7 percent. Vertical tolerance shall be 7/8-inch when measured along a 10-foot straight edge. The overall vertical tolerance of the wall (plumbness from top to bottom) shall not exceed 1

- ¹/₄-inches per 20 feet of wall height. Wall panel levelness tolerance shall be 5/8 inch per 10 feet.
- L. All joints shall be uniform. During construction the maximum allowable offset in any panel joint shall be 7/16 inch. Joint width shall be 1 1/4 inches maximum and 1/2 inch minimum
- M. Check panel tolerance and reset prior to placement of the next panel if out of specification.

3.4 SAMPLING AND TESTING

- A. Certificates of Compliance. Furnish to the Engineer copies of the certificate of compliance for materials and the results of any tests performed by the Wall Company on the materials.
- B. Select Material Density Testing. The Engineer will make at least one density determination per lift of backfill for every 100 feet of retaining wall. The test will be made at random locations; but will be at least 3 feet from back of wall.
- C. Concrete Testing. Strength, slump, air, and yield tests will be conducted in accordance with Section 03055.

3.5 PANEL ACCEPTANCE

- A. Meet 28-day compression test. Panels which meet 75 percent of 28-day strength within 7 days are acceptable for placement in the wall.
- B. No precast panel shall be placed in the wall unit until it has been cured for a minimum of 7 days.
- C. All panels shall be visually free of defects.
- D. Submit certificate of compliance to the Engineer.

END OF SECTION

SECTION 02841M

TRAFFIC BARRIERS

PART 1 GENERAL

Add the following paragraph to 1.1 SECTION INCLUDES:

E. Reset Concrete Barrier

PART 3 EXECUTION

Add the following paragraph to PART 3 EXECUTION:

3.8 RESET CONCRETE BARRIER

A. Remove existing concrete barrier and reset concrete barrier to the stations and offsets shown on the plans. Place new seal between each barrier.

SECTION 02861M

PRECAST RETAINING/NOISE WALLS

PART 3 EXECUTION

Add the following paragraph to section 3.1 LIMITATIONS:

B. Heavy equipment will not operate within 5 feet of the wall face to prevent excessive lateral pressure on the retaining walls.

Delete paragraph 3.3.A in section 3.3 POST HOLES and replace with the following:

3.3 A. Space posts as indicated on the plans.

Delete paragraph 3.7.A in section 3.7 RETAINING WALLS and replace with the following:

3.7 A. Construct Post and Panel Retaining Walls as detailed in the plans.

SECTION 02906S

VEGETATED RIPRAP SWALE

PART 1 GENERAL

1.1 SECTION INCLUDES

Materials and procedures for constructing vegetated riprap swale.

1.2 RELATED SECTIONS

- A. Section 02373: Riprap
- B. Section 02376: Erosion Control Blankets/Channel Liners
- C. Section 02912: Topsoil
- D Seed, Turf Seed, and Turf Sod

PART 2 PRODUCTS

2.1 TOPSOIL

A. As described in Section 02912.

2.2 BROADCAST SEED

A. As described in Section 02922.

2.3 EROSION CONTROL BLANKET

A. As described in Section 02376.

2.4 LOOSE RIPRAP

A. As described in Section 02373.

PART 3 EXECUTION

3.1 PREPARATION

- A. Excavate vegetated riprap swale to the plan depths.
- B. Place and compact suitable material in embankments and dispose of unsuitable material.
- C. Over cut swale 4 inches to allow for deposit of topsoil for seeding.

3.2 INSTALLATION

- A. Spread topsoil to a depth of 4 inches, broadcast seed, and install erosion control blanket.
- B. Place loose riprap in the swale bottom.

END OF SECTION

SECTION 02909S

CHANNEL SUBSTRATE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Materials and procedures for constructing channel substrate.

1.2 RELATED SECTIONS

- A. Section 02912: Topsoil
- B. Section 02922: Seed, Turf Seed, and Turf Sod
- C. Section 02932: Trees, Shrubs, and Groundcovers

PART 2 PRODUCTS

2.1 CHANNEL A SUBSTRATE

- A. Provide material free of organics and other deleterious matter.
- B. Provide substrate material conforming to the following gradation requirements:

Sieve Size	Percent Retained (by weight)	
12 in	10	
6 to 12 in	30	
2 to 6 in	30	
< 2 in	30	

2.2 CHANNEL B SUBSTRATE

- A. Provide material consisting of hard, durable, well-graded rock, free of organics or other deleterious matter.
- B. Provide substrate material conforming to the following gradation requirements:

Sieve Size	Percent Retained (by weight)	
12 in	10	
6 to 12 in	30	
2 to 6 in	30	
0.5 to 2 in	30	
< 0.5 in	0	

PART 3 EXECUTION

3.1 PREPARATION

A. Construct stream channel and banks as shown in the plans

3.2 INSTALLATION

A. Spread substrate material evenly across streambed; tamp in gently but do not compact.

END OF SECTION

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SECTION 02911M

MULCH

PART 2 PRODUCTS

Add the following to Part 2, Products:

2.5 SHREDDED BARK MULCH

- A. Shredded bark mulch will be free from any deleterious materials and certified as weed free.
- B. Grade: Premium.
- C. Maximum size is ½ inch in width and 8 inches in length.

PART 3 EXECUTION

Add the following to paragraph 3.2:

- D. Shredded Bark Mulch
 - 1. Mulch backfilled surfaces of planting beds and other areas indicated
 - 2. Apply 3 inches thickness of shredded bark mulch, and finish level with adjacent finish grades. Do not place mulch against plant stems.

SECTION 02912M

TOPSOIL

PART 3 EXECUTION

Add the following to paragraph 3.2.A, Strip the topsoil:

- 3. Over excavate areas with a significant depth of topsoil to use in areas where insufficient topsoil is available.
- 4. Maximize salvation of on-site topsoil. Do not strip and stockpile B or C horizon.

Add the following to paragraph 3.3, Spread Stockpiled and Contractor-Furnished Topsoil:

E. Spread topsoil to a depth of 4 inches in all areas to be seeded and planted.

SECTION 02913S

INVASIVE WEED CONTROL

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Weed species subject to control are listed on the Utah State Noxious Weed List, the county(s) weed list based on the project location, and any other additional species listed in the specifications. Project documents list which weeds are likely to be found on the project site. The Utah State Noxious Weed List and each county's weed list is attached.

1.2 RELATED SECTIONS

- A. Section 02912: Topsoil.
- B. Section 02922: Seed, Turf Seed, and Turf Sod.
- C. Section 02936: Vegetation Establishment Period.

1.3 PAYMENT PROCEDURES

- A. Include payment for cleaning earthmoving construction equipment under mobilization.
- B. Control of invasive weeds using pre-emergent, selective, and non-selective herbicides will be paid by the unit area.

1.4 REGULATORY REQUIREMENTS

- A. Follow all regulatory, application, and safety precautions listed by the herbicide manufacturer.
- B. Use only licensed pesticide applicator personnel to apply herbicides.

PART 2 PRODUCTS

2.1 HERBICIDE

- A. See the attached list of noxious weeds subject to control and the recommended herbicide for each species.
- B. Use commercially available herbicides specified to control weed species identified.

PART 3 EXECUTION

3.1 CLEANING EQUIPMENT

A. Using high pressure water blasting or steam cleaning methods, clean all earthmoving construction equipment (scrapers, bulldozers, excavators, backhoes, trenchers) of dirt, mud and seed residue before initially entering the project.

3.2 PREPARATION

- A. Avoid any unnecessary disturbance of project areas known to be infested with noxious weeds.
- B. Minimize soil disturbance within right-of-way.
 - 1. Keep all construction operations within slope stake limits.
 - 2. If soil disturbance outside slope stake limits is necessary, observe the following:
 - a. Keep disturbed area to a minimum.
 - b. Monitor and control disturbed areas and topsoil stockpiles for growth of weeds species subject to control.
 - c. Revegetate in accordance with the landscape plans or other project specifications when disturbance is no longer necessary.
- C. Collect and bag noxious weeds before disturbing site.
 - 1. Collect all noxious weeds, not allowing the seeds to fall off, by pulling them and bagging them.
 - 2. Plant identification can be provided by UDOT landscape architect.
 - 3. Collection of Dyers Woad should be a priority.

3.3 CONTROLLING INVASIVE WEEDS

- A. Control invasive weeds. Use pre-emergent, selective, and non-selective herbicides as appropriate. See paragraph B.
 - 1. Inspect and monitor erosion control and other disturbed soils throughout construction.
 - 2. Inspect and monitor landscaping/seeding during the vegetation establishment period. Spot treatment for weeds may be necessary. DO NOT spray entire slope which could hinder all vegetation establishment.
- B. Noxious Weed Table:

Common Name	Scientific Name	Herbicide		
Bermudagrass*	Cynodon dactylon	glyphosate		
Bindweed	Convolvulus spp.	Dicamba+2,4-d or picloram		
Broad-leaved Peppergrass	Lepidium latifolium	metsulfuron or chlorsulforn		
Canada Thistle	Cirsioum arvense	2,4-D, dicamba, picloram		
Diffuse Knapweed	Centaurea diffusa	2,4-D+dicamba or picloram or clopyralid		
Dyers Woad	Isatis tinctoria	2,4-D+dicamba or chlorsulfuron		
Perennial Sorhgum spp (Johnsongrass)	Sorghum halepense, Sorghum Almum	glyphosate		
Leafy Spurge	Euphorbia esula	dicamba or picloram		
Medusahead	Taeniatherum caput-medusa	glyphosate		
Musk Thistle	Carduus nutans	2,4-D amine, metsulfuron or picloram		
Purple Loosestrife	Lythrum salicarial	glyphosate (Rodeo Aquatic label)		
Quackgrass	Agropyron repens	Glyphosate		
Russian Knapweed	Centaurea repens	Picloram or clopyralid or chlorsulfuron		
Scotch Thistle	Onopordium acanthium	2,4-D amine, metsulfuron or picloram		
Spotted Knapweed	Centaurea maculosa	2,4-D+dicamba, picloram o		
Squarrose Knapweed	Centaurea squarrosa	Picloram		
Whitetop	Cardaria spp	2,4-D+dicamba or chlorsulfuron		
Yellow Starthistle	Centaurea solstitalis	picloram or clopyralid		

*Bermudagrass (Cynodon o	dactylon) shall not be a noxious v	weed in Washington County	
County Noxious Wo	eeds		
Cache County			
Common Name	Scientific Name	Herbicide	
Goatsrue	Galega officinalis	2,4-D+dicamba	
Poison Hemlock	Conium maculatum	2,4-D+dicamba	
Puncture Vine	Tribulus terrestris	2,4-D+dicamba	
Carbon County	-		
Common Name	Scientific Name	Herbicide	
Russian Olive	Elaeagnus angustifolia	2,4-D, dicamba, or glyphosate	
Davis County	-		
Common Name	Scientific Name	Herbicide	
Poison Hemlock	Conium maculatum	2,4-D+dicamba	
Buffalobur	Solanum rostratum	2,4-D+dicamba	
Yellow Nutsedge	Cyperus esculentus	glyphosate	
Duchesne County	l	-	
Common Name	Scientific Name	Herbicide	
Russian Olive	Elaeagnus angustifolia	2,4-D, dicamba, or glyphosate	
Grand County			
Common Name	Scientific Name	Herbicide	
Purple Loosestrife	Lythrum salicarial	glyphosate (Rodeo Aquatic label)	
	Juab County		
Common Name	Scientific Name	Herbicide	
Water Hemlock	Cicuta maculata	2,4-D, or dicamba	
	Kane County	-	
Common Name	Scientific Name Herbicide		
Poison Hemlock	Conium maculatum	2,4-D+dicamba	
	Rich County	1	
Common Name	Scientific Name	Herbicide	
Black Henbane	Hyoscyamus niger	2,4-D+metsulfuron	

	San Juan County			
Common Name	Scientific Name	Herbicide		
Silverleaf Nightshade	Solanumk elaeagnifolium	Imazapyr or glyphosate		
Buffalobur	Solanum rostratum	2,4-D or dicamba		
Whorled Milkweed	Asclepias subverticillata	2,4-D or dicamba		
	Sanpete County			
Common Name	Scientific Name	Herbicide		
Houndstonge	Cynoglossum officinale	2,4-D or dicamba		
	Uintah County			
Common Name	Scientific Name	Herbicide		
Russian Olive	Elaeagnus angustifolia	2,4-D, dicamba, or glyphosate		
Purple Loosestrife	Lythrum salicarial	glyphosate (Rodeo Aquatic label)		
	Washington County	,		
Common Name	Scientific Name	Herbicide		
Poison Milkweed	Asclepias subverticillata	2,4-D, or dicamba		
	Weber County			
Common Name	Scientific Name	Herbicide		
Puncture Vine	Tribulus terrestris	2,4-D+dicamba		
	bicides vary, follow the use rate of			

END OF SECTION

SECTION 02922M

SEED, TURF SEED, AND TURF SOD

PART 2 PRODUCTS

Add the following to 2.1, Seed and Turf Seed

F. Use the following seed mixes in the locations specified in the plans:

D / 131	C N	D 1 C	NI 1 C	D 4 C	C 1 D
Botanical Name	Common Name	Pounds of Pure Live	Number of Seeds Per	Percent of Mix by	Seeds Per Square Foot
		Seed Per	Pound	Weight	Square Pool
		Acre	1 Ourid	Weight	
Agropyron	Bluebunch	3.72	117,000	7.81	10
spicatum	Wheatgrass	3.72	117,000	7.01	
Agropyron	Intermediate	12.38	88,000	25.97	25
intermedium	Wheatgrass				
Aristida purpurea	Purple Three-awn	.52	250,000	1.10	3
Artemisia tridentata	Basin Big	.17	2,500,000	.37	10
	Sagebrush				
Artemisia	Cudweed	.02	4,500,000	.04	2
ludoviciana	Sagewort				
Balsamorhiza	Arrow-leaf	2.38	55,000	4.99	3
sagittata	Balsamroot				
Bromus carinatus	Mountain Brome	6.53	100,000	13.71	15
Chrysothamnus	Rubber	.54	400,000	1.14	5
nauseosus	Rabbitbrush				
Elymus glaucus	Blue Wildrye	9.90	110,000	20.77	25
Elymus cinereus	Basin Wildrye	8.38	130,000	17.56	25
Koeleria cristata	Prairie Junegrass	.06	2,315,400	.12	3
Stipa comata	Needle-and-	1.89	115,000	3.97	5
	Thread Grass				
Symphoricarpos	Mountain	1.16	75,000	2.44	2
oreophilus	Snowberry				
Total		48.66		100	133